

THE
B E A U T I E S
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N A T U R E and **A R T**
D I S P L A Y E D,
 I N A
T O U R through the **W O R L D;**
C O N T A I N I N G,

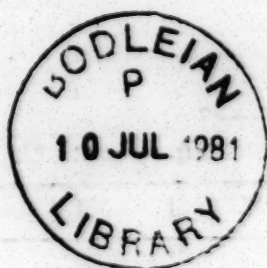
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| <p>I. A General Account of all the Countries in the World, remarkable for either Natural or Artificial Curiosities; their Situation, Boundaries, Extent and Divisions; their Rivers, Air, Soils, Chief Cities, &c.</p> <p>II. A particular Account of the most curious natural Productions of each Country, in the Animal, Vegetable, and Fossil Kingdoms; of remarkable Mountains, Caverns, and Volcano's; of Medicinal and other singular Springs; of Cataracts, Whiripools, &c.</p> <p>III. An Historical Account of the most remarkable Earthquakes, Inundations, Fires, Epidemic Diseases, and other public Calami-</p> | <p>ties, which have, at different times, visited the Inhabitants.</p> <p>IV. Extraordinary Instances of Longevity, Fertility, &c. among the Inhabitants; together with an Account of their most celebrated Inventions, Discoveries, &c.</p> <p>V. Particular Descriptions of the most remarkable Public Buildings, and other singular Productions of Art.</p> <p>VI. Curious Remains of Antiquity; remarkable Laws, Customs, and Traditions of the Inhabitants; together with a Summary View of the most extraordinary Revolutions among them.</p> |
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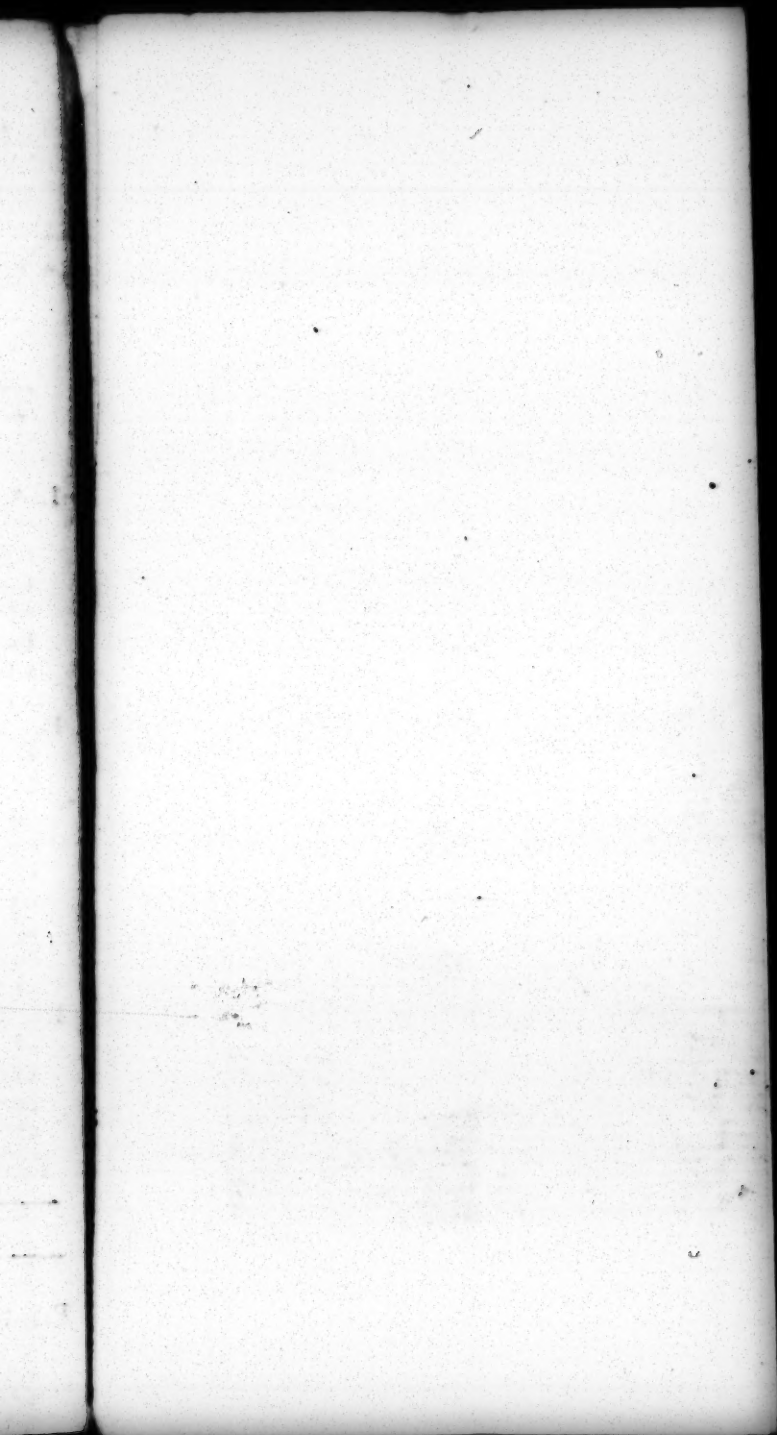
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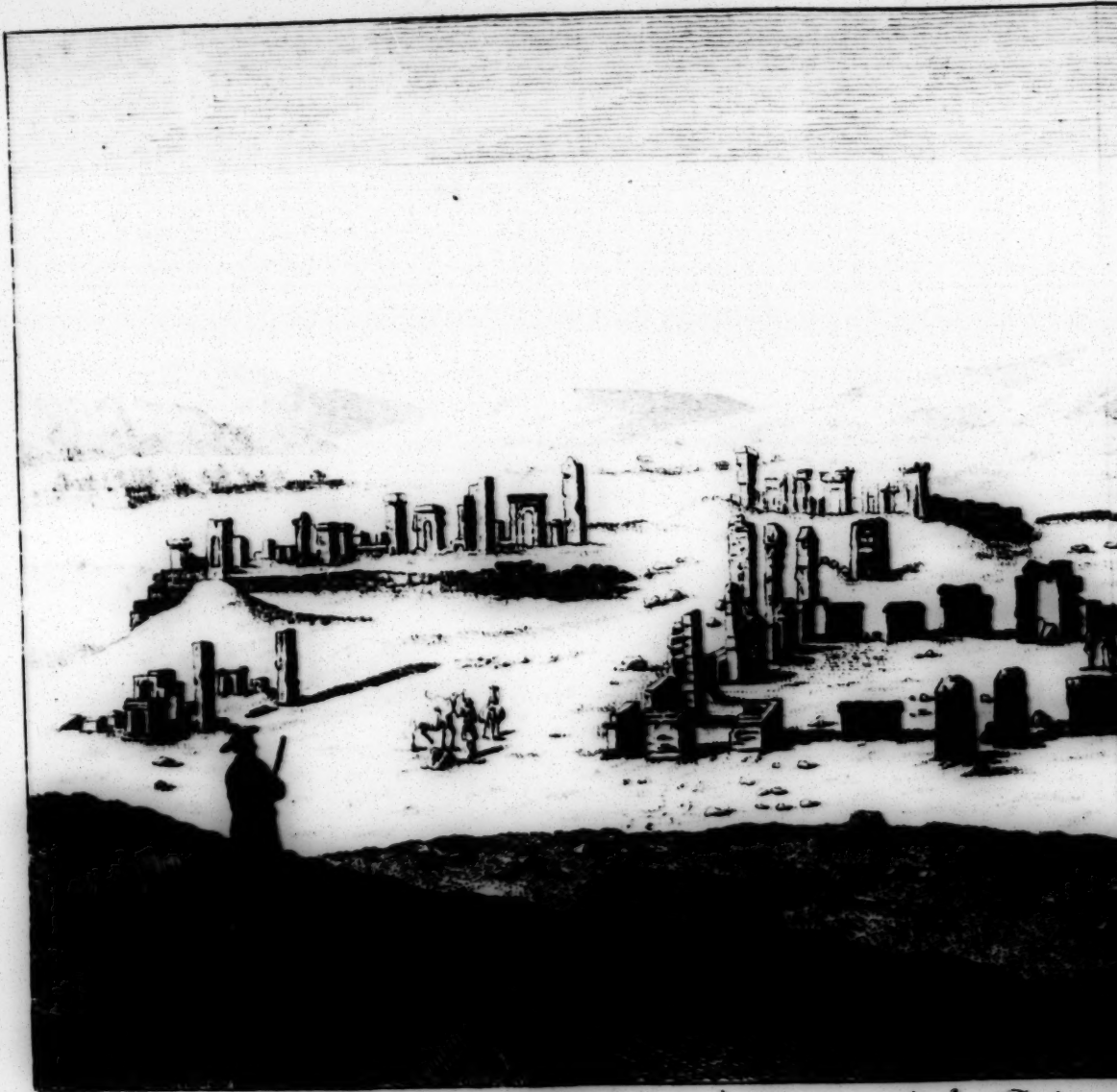
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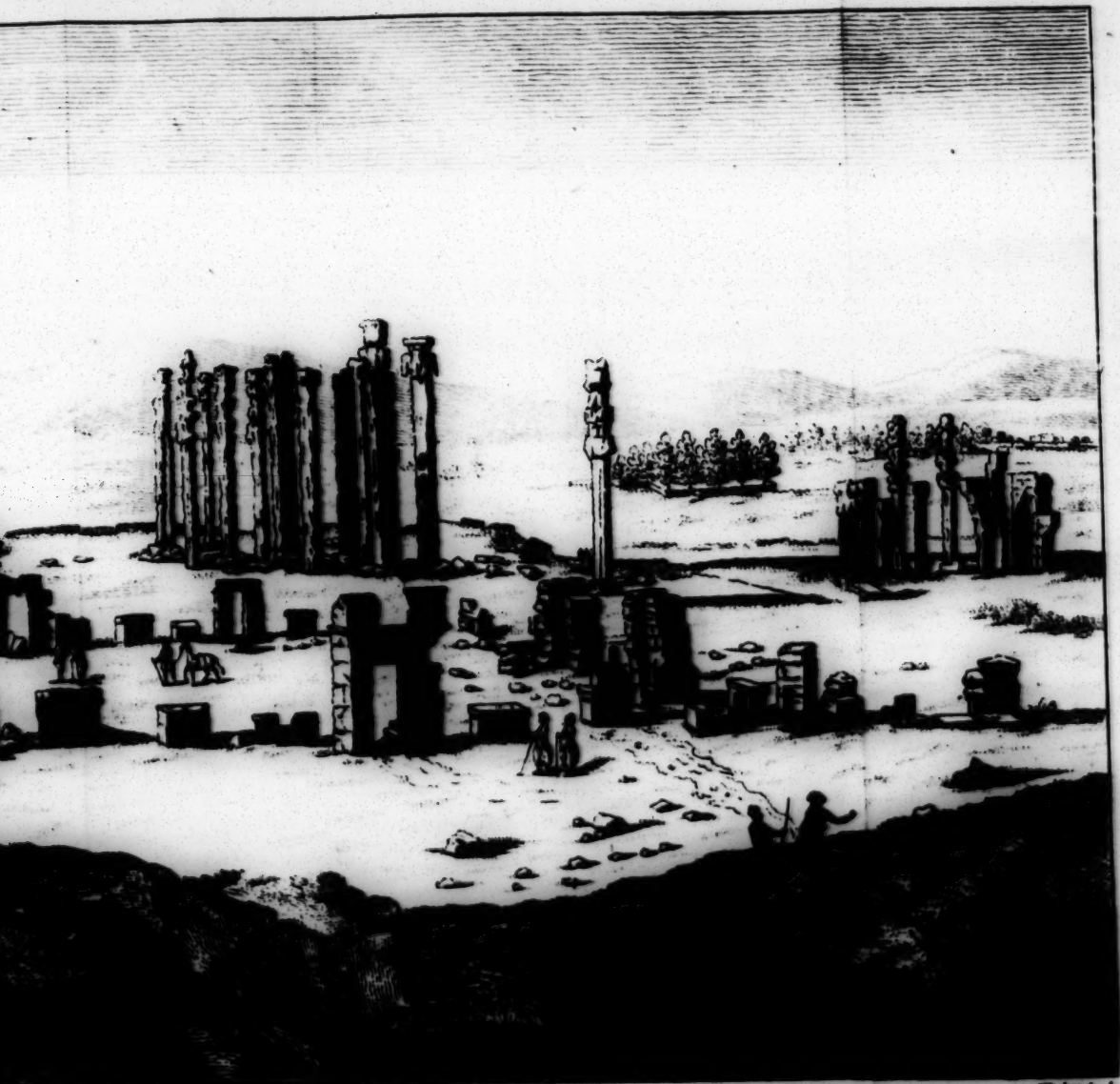
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A View of the Ruins of the Palace of



place of Persepolis from the East

Deland





THE
BEAUTIES
OF
NATURE AND ART
DISPLAYED,
IN A
TOUR through the WORLD.

CHAP. II. of PART II. *Continued.*

SECT. V.

*Curious Remains of Antiquity in Persia, with a
summary View of the most extraordinary Revo-
lutions among the Inhabitants.*

REMAINS of ANTIQUITY.

THE principal remains of antiquity
T in Persia are the famous ruins of
Persepolis, a city which was the
residence of the antient Kings of
Persia, and was scarce inferior to
any city in the world in splendor and magnifi-
cence. The wealth of it is evident by the
great plunder Alexander's soldiers made when

he had taken it, and given it up to destruction, in revenge for the many cities of Greece which the Persians had destroyed, and by the treasure he himself seized upon, which amounted to one hundred and twenty thousand talents of gold and silver. The royal palace was a structure of such beauty and magnificence, that perhaps it was never exceeded by any. It stood on a rocky hill, and took up fifty acres of ground; being surrounded, according to Diodorus Siculus, with a triple wall, the first of which was sixteen cubits high, the second double that height, and the innermost sixty cubits, all built of marble. The palace itself was of a square form, and on each side had brazen gates. The halls and apartments of it were exceedingly spacious and lofty, the walls of them adorned with noble sculptures, some of which still remain to testify its antient splendor; and the cedar roofs shone with gold, silver, ivory, and other precious materials. The King's throne was of pure gold, embellished with pearls and precious stones; and the furniture of the chambers was rich beyond description, the beds being of solid gold beset with gems, and every thing else proportionably sumptuous. Its glory however did but procure its destruction, for at the great feast which Alexander held in it, he was persuaded by Thais, the Athenian courtesan, that it would be a noble exploit to burn so fine a palace; which, being heated with wine, he readily agreed to, and himself led the way with a fire-brand. Thus this superb palace, together with

the city, which for several ages had been the seat of the Persian monarchs, was soon reduced to a heap of ruins, which are still to be seen about thirty miles to the north of Schiras, and carry evident tokens of its antient magnificence. The lofty columns yet standing declare the height of the fallen roofs; and the stairs shew that the apartments they led to were much superior to any thing in our modern palaces. These magnificent remains appear as in a kind of amphitheatre; surrounding mountains forming a half moon, as if it were to embrace them; they are seated in a fine plain, that extends two leagues in breadth, and near forty leagues in length. That superb edifice has the walls of three of its sides still standing. The front extends 600 paces, from north to south, and 390 from east to west; it is situated at the foot of a mountain, antiently called the Royal Mountain, where an ascent is formed between some scattered rocks; beyond which there appear to have been formerly some other buildings.

The top of this edifice presents to view a platform of 400 paces, extending from the middle of the front wall to the mountain; and along three sides of this wall is carried on a pavement of two stones, joined together, eight feet broad: with respect to the height of the wall, it is in some places 24 feet. The stones of the wall are black, harder than marble; some of them finely polished, and many of them of such an amazing size, that it is diffi-

cult to conceive how such prodigious masses were raised.

The principal stair-case is placed between the middle of the front and the northern end of the edifice; it consists of two flights of steps, that wind off from each other to the distance of 42 feet at the bottom: these steps are only four inches high, and fourteen in breadth; there are 55 of these steps on the northern side, and 53 on the south; and there are several others under ground, that have been covered over by length of time, as well as part of the wall, which rises 44 feet 11 inches high in the front. At the bottom of these two flights of steps is a single flight extending 51 feet 4 inches from one to the other; from thence the two flights are carried off from each other, and return back from the center, at an equal distance from the extreme parts of the top; and above these flights is a pavement of large stones, and another single flight of steps seventy-five feet in width answering to that at the bottom, and leading up to the grand entrance of the edifice. This stair-case has a very fine and singular effect, answerable to the magnificent remains of the rest of the building.

On ascending the upper steps, the spectator sees before him, at the distance of 42 feet from the front wall of the stair-case, two grand portals, and as many columns. On the inside, upon a kind of pilaster, on each hand, is a large figure in basso relievo, which bears
some

some resemblance to the Sphynx. Each figure is twenty-two feet from the fore to the hinder legs, and 14 feet and an half high. The faces of these animals are broken off, and their bodies much damaged ; but what is most extraordinary is, the breast and fore part project from the pilaster. Indeed, it is impossible to know what these figures thus mutilated were designed to represent. On the upper part of these pilasters are characters, which, from their smallness and elevation, it is impossible to distinguish. The two columns that appear between the portals are the least damaged of all, particularly with respect to their capitals, and the other ornaments of their upper parts : but the bases are entirely covered over with earth. They are 15 feet in circumference, and rise to the height of 54 feet.

At the distance of 52 feet south of the same portal, is a large basin for water, cut out of a single stone, 20 feet long, and 17 feet 5 inches in breadth ; and raised three feet and an half above the surface of the floor. Proceeding southward from the portals already described, you see two other flights of steps, resembling the former ; the one to the east, the other to the west. On the upper part, the wall is embellished with foliage, and the representation of a lion rending a bull, in basso relievo, much larger than life. From hence extends a wall 45 feet in length, beyond the lower part of the stair-case ; and there is an interval of 67 feet, extending to the western front, which

corresponds with the other, and has three ranges of figures, one over the other, with a lion tearing an ass, that has a horn projecting from the forehead; and between these animals and rows of figures, is a square filled with antique characters, the uppermost of which are defaced. On the other side of the stairs are three ranges of small figures; but those in the upper row are only visible from the waist downwards; these figures are only two feet nine inches high, and the wall, which is five feet three inches in height, has an extent of 98 feet.

On the top of the steps last described, is an entrance into an open place paved with large stones, whose breadth is equal to the distance from the stair-case to the first columns, which comprehends the space of 22 feet 2 inches. These columns are disposed into two ranges, each of which consists of six pillars, but none of them are entire. At the distance of 70 feet 8 inches, there were formerly six rows of other pillars, each row consisting of six: these thirty-six pillars were likewise 22 feet 2 inches distant from each other, but only seven of them are now entire: however all the bases of the others are standing.

At the distance of 70 feet 8 inches from these rows of columns, on the west, towards the front of the stair-case, were once twelve other columns in two ranges, each of which contained six, but only five are now remaining: the ground is covered with the fragments of columns;

columns; and the ornaments that served for their capitals, between which are pieces of sculpture representing camels on their knees. On the top of one of these columns is a compartment representing camels in the same posture.

On advancing towards the east you are presented with a view of several ruins, consisting of portals, passages, and windows: the insides of the portals are adorned with figures in bass relief: these ruins extend 90 paces from east to west, and 125 from north to south; and are 60 paces both from the columns and the mountains. In the middle of these ruins the earth is covered with 76 broken columns, nineteen of which still support their entablature; their shafts are formed of four pieces besides the base and capital. At the distance of 118 feet from these columns to the south, is an edifice that rises higher than any other part of the ruins, from its being situated on a hill. The front wall, which is five feet seven inches high on that side, is composed of a single range of stones, some of which are eight feet deep; and the wall extends 113 feet from east to west, but has neither figures or any other ornaments: however, in the middle of the front are the ruins of a double stair-case, on the sides of which are several figures: the rest of the building was chiefly composed of large and small portals, and is entirely destroyed. The largest of these portals is five feet wide, and five feet two inches deep. Among the rest, two portals appear to the north,

north, with three niches or windows walled up. Under these portals are the figure of a man and two women down to the knees : for their legs are covered with the earth that is raised against them : under the other gate is the figure of a man holding a lion by the mane. To the south is a portal and four open windows, each of which are five feet nine inches wide, and eleven in height, including the cornice ; their depth is equal to that of the grand portals. The two sides of this gate are carved with the figure of a man having something on his head resembling a tiara. He is accompanied by two women, one of whom holds an umbrella over his head. On the inside, three niches are covered with antient Persian characters.

There are two other gates to the west that are not covered ; within one of these is the figure of a man fighting a bull ; with his left hand he grasps a horn in his forehead, while with his right he plunges a dagger into his belly. On the other side, the figure of another man clasps the horn with his right, and stabs the beast with his left. The second portal has the figure of a man carved in the same manner, with a winged deer that has a horn in his forehead.

Behind this edifice are the ruins of another, which exceed it in length by 38 feet. It has also niches and windows, the former of which are cut out of single stones. A little to the south is a double flight of steps separated by walls, embellished with small figures and foliage ;

liage; farther to the south are subterranean passages which appear to have been the remains of an aqueduct; still farther to the south, are the remains of another edifice, which extend 160 feet from north to south, and 191 from east to west. Ten portals belonging to it are still to be seen; together with seven windows and forty enclosures that were formerly covered with rooms. In the middle are the bases of thirty-six columns in six ranges, and the ground is covered with large stones, under which were aqueducts.

There antiently stood another structure to the westward of the last mentioned building. On the ruins of the wall, which still rises near two feet above the pavement, are cut the figures of men in basso relievo, each represented with a lance. The ground enclosed by this wall contains a number of round stones, that were the bases of columns. On the east side of these last ruins are the remains of a beautiful staircase, sixty feet in length, resembling that of the front wall: but though most of the steps are destroyed by time, the wall that separates the two flights is still eight feet in height, and adorned with characters and figures almost as big as the life. Columns were formerly disposed between this edifice and the other last mentioned: among these ruins are four portals, each adorned on the inside with the figure of a man, and two women holding an umbrella over his head.

A little

A little to the north of these two last edifices, are two portals with their pilasters, on one of which is the figure of a man and two women, one of whom holds an umbrella over his head. Above these women is a small figure with wings, which are expanded to the sides of the portico. Over the second figure a man is seated in a chair, with a staff in his hand, and another stands behind him with his right hand upon the chair. A small figure above holds a circle in his left hand, and points to something in his right. Under this portal are three ranges of figures, all of which have their hands lifted up; and over the third pilaster which remains, two women hold an umbrella over the head of a man. The earth is also covered with fragments of columns and other antiquities.

From hence you proceed to the last ruins of the structures, on the mountain. On the south side are two portals, under each of which a man is seated in a chair, with a staff in his right hand, and in his left a kind of vase. Behind him is another figure, which holds something on his head like the tail of a sea-horse, and has a linen cloth in his right hand. Below are three rows of figures with lifted hands, four in the first, and five in each of the other two rows. Above this are several ornamental ranges of foliage, the lowest of which is intermixed with small lions, and the highest with oxen: over these ornaments is a little winged figure, which holds in his left hand something that resembles a small glass, and
makes

makes a signal with his right. These portals are ornamented with several other figures, of which a description might be tedious.

There are two antient tombs of the Kings near the mountain, one to the north, and the other to the south, both of them hewn out of the rock, and both noble fragments of antiquity. Their fronts are covered with figures and other ornaments; the form of both is nearly the same, and therefore a description of that to the north will be sufficient. That part of the tomb on which the figures are carved is forty feet wide; the height is almost equal to the width below, and the rock extends on each side to the distance of sixty paces. Below, a range of four columns support the entablature on their capitals, each of which is composed of the heads of two oxen, as far as the breast, with the fore legs bent on the top of each column. The gate, which is surrounded with ornaments, is placed between two of these columns in the middle, but is at present almost closed up. Above the columns are the cornice and entablature, adorned with eighteen small lions in bass relief, nine on each side, advancing towards the middle, where there is a small ornament resembling a vase. Above the lions are two ranges of figures almost as large as the life, fourteen in each range, armed, and lifting up their hands, as if to support the building above them; and on the side is an ornament somewhat in the form of a pillar, with the head of some animal, that has only one

horn. Above this is another cornice ornamented with leaves. On the left hand, where the wall projects, are three rows of niches one above each other, each of them containing two figures armed with lances, and three others on the side armed in the same manner. There are likewise two on the right side, with their left hands placed on their beards, and the right on their body. On the side of these are three others in the same disposition as those on the other side. At some distance below, and between these figures and an ornament that has some distant resemblance of a round pillar, there is another figure on each side, very much impaired. Above on three steps stands a figure that has the air of a King pointing at something with his right hand, and holding a kind of bow in his left. Before him is an altar, on which an offering is made, from whence the flames are represented ascending. Above this altar appears the moon; and it is said, that there was once a sun behind the figure, but nothing of it is now to be seen. In the middle, and above all this, appears a small mystic figure, that is also to be seen in several parts of the other buildings.

Two leagues from these ruins is a place called Noxi Rustan, where there are four tombs of persons of eminence among the antient Persians, that much resemble those of Persepolis; only they are cut much higher in the rock. This place receives its name from one Rustan, whose figure is there carved to perpetuate his memory.

memory. He is said to have been a potent prince of an immense stature; for it is pretended, that he was forty cubits high; and, according to some ridiculous tradition, he is said to have lived 1113 years.

The tombs have their bases eighteen feet above the surface of the causeway, and rise above four times that height; and the rock is twice as high as the tombs, which are sixty feet wide in the middle. Under each tomb is a separate table, filled with large figures in low relief; and on two of these tables are some traces of men fighting on horseback. Between these tombs are three other tables, covered with figures, among which is a man on horseback, preceded by two others, and followed by a third, which is almost defaced; there are also some figures in the space between the two last works, and three under the third, two of which hold out their hands to each other: one of these is a woman, and both of them are half buried in the earth.

These tombs possess an extent of two hundred and eighty paces, and at sixty paces distant from the first of them, there is a little square building. The figure of a man on horseback between the two tombs, and in the middle of the fourth niche, has his hair shaped according to our mode, with a crown upon his head, and a pointed bonnet rising above it. He is dressed after the Roman manner, and has a large sword by his side, with the hilt in his

left hand; his right is presented to a person before him; the third figure, which is also dressed in the Roman manner, opens his hands like a suppliant.

Three figures half buried appear on the side of the third tomb, and two of them have their hands placed in a kind of circle. That in the middle, which is on horseback, represents Rustan in a Roman dress; he has likewise a bonnet, and an ornament like a crown, with flowing hair, a large beard, and his left hand on the hilt of his sword. Before him is the figure of a woman, with flowing hair, and a crown, dressed like a Pallas, and supporting part of her drapery with her left hand. The third figure represents a military man with a tiara on his head, and his left hand grasping the hilt of his sword: the fifth compartment is an imperfect appearance of figures fighting on horseback. All these are carved in the rock.

On the western side of this mountain, at 200 paces distance, are two tables with figures, likewise cut in the rock. That to the left represents two men on horseback, one of whom grasps a circle, of which the other has quitted the hold. The tomb said to have been that of Noxi Rustan, evidently appears to be the tomb made by Darius Hystaspes, from its exactly corresponding with the description given of it by Ctesias, in his history of Persia, after Herodotus; and with that of Diodorus Siculus.

REVO.

REVOLUTIONS *and other* MEMORABLE EVENTS.

PERSIA constituted part of the first monarchy, called the Assyrian Empire, of which Nimrod, or his son Belus, or Baal, is said to have been the founder, about 200 years after the flood; and the time elapsed from the foundation of the Assyrian Empire to the reign of Sardanapalus, the last of that race of Kings, is generally supposed to consist of 1450 years. Sardanapalus is represented as having surpassed all his predecessors in effeminacy, luxury, and cowardice; at which Arbaces, governor of Media, being provoked, formed a conspiracy against him; and having been joined by Belshis, governor of Babylon, and several other powerful princes, took the field against the Emperor, who was defeated and pursued to the gates of Nineveh, wherein he shut himself up, in hopes the rebels would never be able to take so well fortified a city. It had been moreover declared by an antient oracle, that Nineveh could never be taken, unless the river, upon which it stood, became its enemy. This oracle buoyed up Sardanapalus, because he considered an event of that kind as impossible: but when he saw, that the Tigris, by a violent inundation, had thrown down twenty stadia of the city wall, and by that means opened a passage to the enemy, he concluded himself lost: he resolved however to die in such a manner as, according to his opinion, should best

cancel the infamy of his scandalous and effeminate life: he therefore ordered a pile of wood to be made in his palace, and setting fire to it, burnt himself, his eunuchs, his women, and his treasures, which consisted, according to most of the antient historians, of a sum that exceeds all credibility.

After the death of Sardanapalus, about the year of the world 3257, Arbaces usurped the dominions of Media and Persia; Belochus, or Phul, assumed the government of Babylonia and Chaldea; Thilgamus, or Ninus the Second, reigned in Nineveh and the adjacent provinces; and the other conspirators usurped the sovereignty of the rest of the provinces of the Assyrian empire, and became independent sovereigns.

Belochus, or Belesis, is the same with Nabonassar, from whose reign began the famous astronomical epocha at Babylon, called from him the æra of Nabonassar. In Scripture, he is called Balladan; he reigned twelve years, and was succeeded by his son Merodach Balladan. This is the prince who sent ambassadors to King Hezekiah, to congratulate him on the recovery of his health. After him, there reigned several other Kings at Babylon, with whose history we are entirely unacquainted: but the first King of Nineveh, after the dissolution of the Assyrian monarchy, was Ninus the Second, called Tiglath Pileser, to whom Ahaz, King of Judah, being attacked by the Kings of Syria and

and Israel, sent great part of the treasures of the temple which he had robbed, to purchase his friendship and assistance, promising, at the same time, to become his vassal, and to pay him tribute.

The King of Nineveh finding so favourable an opportunity of adding Syria and Palestine to his empire, readily accepted the proposal ; and, advancing that way with a numerous army, defeated Rezin, King of Syria, took the city of Damascus, and put an end to the kingdom erected there by the Syrians. From thence he marched against Phacæa, and took all that belonged to the kingdom of Israel beyond Jordan, or in Galilee : but he made Ahaz pay dear for his protection and assistance, exacting of him such exorbitant sums of money, that, for the payment of them, he was obliged not only to part with his own treasure, but to take all the gold and silver that remained in the temple. Thus the alliance served only to drain the kingdom of Judah, and to bring into its neighbourhood the powerful Kings of Nineveh.

Sabachus the Ethiopian, whom the Scripture calls So, having made himself master of Egypt, Hosea, King of Samaria, entered into an alliance with him ; hoping, by that means, to shake off the Assyrian yoke. To this end he withdrew his dependance upon Salmanasar, King of Nineveh, refusing to pay him any further tribute, or make him the usual presents ; upon which Salmanasar marched
against

against him with a powerful army ; and, after having subdued all the plain country, shut him up in Samaria, where he kept him closely besieged for three years ; at the end of which he took the city, loaded Hosea with chains, threw him in prison for the rest of his days, carried away the people captive, and planted them in Media ; and thus was the kingdom of Israel, or of the ten tribes, destroyed in the year of the world 3269, about 250 years after its separation from the kingdom of Judah.

Salmanasar, dying after a reign of fourteen years, was succeeded by his son Sennacherib, called also Sargon in Scripture. As soon as this prince mounted the throne, he renewed the demand of the tribute exacted by his father from Hezekiah ; and, upon his refusal, he declared war against him, and invaded Judea with a numerous army ; King Hezekiah, desirous of peace upon any terms, sent the Assyrian King both the treasures of the temple and his own, to appease him ; notwithstanding which, Sennacherib still continued the war, and took all the strong places of Judah, except Jerusalem, which also was reduced to the utmost extremity. At this very juncture, Sennacherib, being informed that Tirhakah, King of Ethiopia, in conjunction with the King of Egypt, were advancing to the relief of Jerusalem, marched to meet the confederate Kings ; and having defeated them, returned to the siege of Jerusalem : but in one single night, 185,000 men of his army perished by the sword of a destroying

destroying angel ; after which the Assyrian King was obliged to return to his own country, with the miserable remnant of his army, covered with shame and confusion ; soon after which his two eldest sons conspired against him, and killed him in the temple of Nisroch his god, in the year of the world 3323.

The two eldest sons of Sennacherib, being obliged, after this parricide, to fly into Armenia, left the kingdom to Esarhaddon, their youngest brother ; and the royal family of Babylon becoming extinct, there was an interregnum of eight years, full of troubles and commotions, of which Esarhaddon taking advantage, made himself master of Babylon ; and having reunited Syria and Palestine to the Assyrian empire, he entered the land of Israel, and carried away all the inhabitants captive, into Assyria, except an inconsiderable number that escaped his pursuit ; and that the country might not become a desert, he sent colonies of idolatrous people, taken out of the countries beyond the Euphrates, to dwell in the cities of Samaria. He likewise defeated Manassih, King of Judea ; and, having taken him prisoner, sent him in chains to Babylon ; but he afterwards obtained his liberty, and returned to Jerusalem.

Esarhaddon, after a reign of thirty-nine years over the Assyrians, and thirteen over the Babylonians, was succeeded by his son Salsduchinus, who is called in Scripture Nebuchodonosor, which

which name was common to the Kings of Babylon ; and to distinguish him from the rest, he was called Nebuchodonosor the First. He was succeeded by his son Saracus, against whom Nabopolassar the general of his armies raised a rebellion, and in the year of the world 3378, possessed himself of Babylon, over which he reigned one and twenty years ; and then entering into an alliance with Cyaxares, King of the Medes, they united their forces, and took the city of Nineveh by storm, Saracus the King being killed during the siege. Nineveh was entirely destroyed ; and the city of Babylon now became the capital of the Assyrian empire, of which Nabopolassar was acknowledged sovereign, in the year of the world 3385.

Some neighbouring princes being alarmed at the growing power of Nabopolassar, entered into an alliance against him and Cyaxares his confederate. At the head of this alliance was Necho, King of Egypt, who subdued Syria and Palestine, and advanced towards the Euphrates ; upon which Nabopolassar, now grown old, associated his son Nebuchadnezzar with him in the government, and sent him at the head of a formidable army to oppose Necho. This prince defeated Necho's army near the Euphrates, and marching towards Syria and Palestine, reunited those provinces to his dominions : he likewise entered Judea, besieged and took Jerusalem, and caused King Jehoiakim to be put in irons, with a design to have carried him to Babylon ; but being moved
with

with his affliction, he restored him to his throne in the year of the world 3398. Great numbers of the Jews, and among the rest some children of the royal family, were carried captives to Babylon, whither all the treasures of the King's palace, and a part of the sacred vessels of the temple, were also sent.

In the year of the world 3399, died Nabopolassar, King of Babylon, after having reigned one and twenty years; and upon the news of his death, his son Nebuchadnezzar set out for Babylon. In the fourth year of his reign, he had a dream, at which he was greatly terrified, though he could not call it again to mind; upon which he consulted the wise men and diviners of his kingdom, requiring them to make known to him the substance of his dream. They all answered, that it was beyond the reach of their art to divine the dream itself; and that the utmost they could do was to give him the interpretation of his dream, when he had made it known to them; upon which the King, falling into a violent rage, condemned them all to die. Daniel, a young captive Jew, and three of his companions, being included in the sentence, as ranked among the wise men, desired to be introduced to the King, to whom he revealed the substance of his dream, which convinced Nebuchadnezzar, that the God of the Israelites was the supreme Deity; and he advanced Daniel to the highest offices in the kingdom.

In

In the mean time, Jehoiakim, King of the Jews, having revolted from the King of Babylon, a war commenced, in which the King of the Jews being killed, was succeeded by his son Jechonias, who was besieged in Jerusalem by the Assyrian generals, until Nebuchadnezzar himself arrived in the army, who soon after reduced the city, and plundered both the temple and the King's palace of their treasures, and sent them away to Babylon, together with all the golden vessels remaining which Solomon had made for the use of the temple. He carried away likewise a vast number of captives, among whom was Jechonias, his mother and his wives, with all the chief officers and great men of his kingdom, and set up Mattaniah, called otherwise Zedekiah, the uncle of Jechonias, upon the throne of Judah, in the year of the world 3405.

Zedekiah having also broke the oath of fidelity he had taken to Nebuchadnezzar, and made an alliance with the King of Egypt, Nebuchadnezzar laid siege to Jerusalem, defeated the Egyptians, who were marching to its relief, and at length, after a twelve month's siege, took the city by storm; upon which a terrible slaughter ensued. Zedekiah's two sons were by order of the King of Assyria killed before their father's face, with all the nobility and principal men of Judah. Zedekiah himself had both his eyes put out, and was loaded with chains, and carried to Babylon, where he was confined in prison as long as he lived. The city

city and temple was burnt, and all their fortifications demolished.

Nebuchadnezzar, in the twenty-first year of his reign, and the fourth year after the destruction of Jerusalem, marched again into Syria, and besieged Tyre, which stood out against him thirteen years, when the inhabitants, being reduced to the last extremity, retired with the greatest part of their effects into a neighbouring island, half a mile from the shore, where they built a new city, the name and glory of which extinguished the remembrance of the old one, which from thence forward became a mere village, retaining the name of antient Tyre. Nebuchadnezzar conquered Egypt, which revolted soon after; and when this prince had finished all his conquests, and was in a state of tranquility, he put the last hand to the embellishing of Babylon.

In the year of the world 3435, whilst nothing seemed wanting to compleat Nebuchadnezzar's happiness, as he was walking in his palace, and admiring the beauty and magnificence of his buildings, his understanding left him, he was driven from men, and did eat grass like oxen; and his body was wet with the dew of heaven, till his hair was grown like eagles feathers, and his nails like birds claws: but after seven years, he recovered his senses, and the use of his understanding, and was restored to his throne, and became greater and more powerful then ever. Being affected with

the highest gratitude, he caused a solemn edict to be published through the whole extent of his dominions, what astonishing and miraculous things God had wrought in his person; and died one year after his restoration, having reigned forty-three years, reckoning from the death of his father.

Nebuchadnezzar was succeeded by his son Evil Merodach, who, after a reign of two years, was assassinated, and succeeded by Neriglissar, his sister's husband, one of the conspirators, in the year of the world 3444. This prince, after his accession to the crown, made great preparations for war against Cyaxares, King of Media, who sent for his nephew Cyrus, King of Persia, to his assistance. In the mean time Neriglissar was succeeded by his son Laborosoarchod, who reigned but nine months; and, in the year 3449, was succeeded by Labynit, or Nabonid, who is called in Scripture Belshazzar, and is supposed to be the son of Evil Merodach, by his wife Nitocris.

In the reign of Belshazzar, about the year of the world 3466, Babylon was taken, the King killed, and an end put to that empire by Cyaxares, King of the Medes, and Cyrus, King of the Persians, after having defeated and taken prisoner Cræsus, King of Lydia, and general of the Assyrian and Lydian armies. Babylon some years after ceased to be a royal city; the Kings of Persia, chusing to reside elsewhere,
de-

delighted more in Shushan, Ecbatana, Persepolis, or any other place.

Cyrus the Persian, and Cyaxares the Mede, having reigned jointly over the dominions they had conquered for the space of two years, Cyaxares died, upon which Cyrus became sovereign of Media and Persia by inheritance, as he did of the Assyrian empire by conquest; and the whole from thence obtained the name of the Persian empire, of which Cyrus is esteemed the founder. His uncle Cyaxares, whom he succeeded in Media, is in Scripture called Darius the Mede. The empire was divided by Cyrus into 120 provinces, or governments, and every governor was obliged to give an account of his administration to three great officers of state, who always resided at court, and of whom the prophet Daniel was the chief, who foretold the destruction of the Assyrian empire, and the restoration of the Jews. In the first year of the reign of Cyrus expired the seventieth year of the Babylonish captivity, when Cyrus published the famous edict, by which the Jews were permitted to return to Jerusalem. He restored at the same time to the Jews, all the vessels of the temple of the Lord, which Nebuchadnezzar had brought from Jerusalem, and placed in the temple of his god Baal; and soon after the Jews departed, under the conduct of Zerobabel, to their own country.

In the year of the world 3475, Cyrus died, in the seventieth year of his age, thirty years after he was first constituted general of the

Persian forces, nine after the taking of Babylon, and seven after the death of his uncle Cyaxares, when he became sole monarch of the Persian empire. He left two sons, Cambyfes and Tanaoxares, appointing Cambyfes his successor, and to Tanaoxares he gave several considerable provinces. Cambyfes, in the fourth year of his reign, invaded Egypt, upon intelligence that Amasis, King of that country, was endeavouring to render himself independent of the Assyrian empire. During Cambyfes's invasion of Egypt, King Amasis died, and was succeeded by his son Psameticus, who tried his fortune with the Persians in a general battle; but being defeated and made prisoner, he was used with great humanity by the conqueror, who restored him to his throne: but endeavouring once more to render himself independent, Cambyfes ordered him to be put to death in the year 3480; and proceeded to invade Ethiopia, in which expedition he lost great part of his army by famine, and other hardships, and was obliged to retire. About the same time he received an account of the loss of an army he had sent to Lybia, which was destroyed by a whirlwind, that raised the sands in those deserts to such a degree, that the whole army was covered and lost in it.

These disappointments had such an effect upon Cambyfes, that they turned his brain: he exercised great cruelties on the Egyptians, and his other subjects, and still greater on his relations. He became so jealous of his brother
Ta-

Tanaoxares, or Smerdis, that he ordered him to be murdered; which his sister Meroe, whom he had married, reproaching him with, he caused her also to be murdered, and several of the officers of his court to be buried alive. Cambyfes, in the mean time returning through Syria towards Babylon, received advice, that his brother Smerdis had usurped the throne, which Smerdis was in reality a cheat, who had imposed himself on the people for the King's brother, who had been murdered. The King therefore determining to hasten his march towards Babylon, upon mounting his horse, fell upon his sword, which happened to be out of the scabbard, and received a mortal wound in his thigh, of which he died soon after, in the year of the world 3482.

Smerdis the usurper was the son of one of the Magi, governor of Babylon; and resembling the murdered Smerdis, both in person and age, found the people easily imposed on, and ready to acknowledge him for their sovereign upon the death of Cambyfes: but the usurper chusing to remain concealed in the palace, and seldom stirring out, or suffering the nobility to approach him, lest the imposture should be discovered, gave the grandees a suspicion that he was not really the prince he pretended; and being soon afterwards fully convinced of the imposture, they resolved to cut him off; and having found means to get admittance into the palace, Darius Hystaspes, one of the conspirators, dispatched him, in the year of the world 3483,

and was immediately elected Emperor; and, in order to strengthen his title, married Atossa, the sister and wife of Cambyses, and Aristona a daughter of Cyrus.

Darius Hystaspes was the Ahasuerus of the Scriptures, who published that edict against Haman, in favour of the Jews, at the request of Queen Esther, and commanded the building of the Temple to be continued, at the expence of the state. Darius removing the seat of the government from Babylon to Susa, or Shushan, some malecontents took advantage of his absence, and endeavoured to render Babylonia an independent kingdom; and Darius laying siege to Babylon, in the year of the world 3488, continued before it eighteen months, and probably could not have taken it in as many years, if Zopyrus, one of his generals, had not deserted over to the Babylonians, and pretending to have been barbarously used by Darius, had insinuated himself so far into the favour of the citizens, that they entrusted him with the command of their troops, which gave him an opportunity of betraying the city into the hands of his master, Darius, who caused the walls to be demolished, and impaled 3000 of the citizens who had been most active in the revolt.

The next expedition of Darius was against the Scythians; and having passed the Thracian Bosphorus and the Danube, the Scythians retired to their snowy mountains, drawing the

Persians

Persians so far into their desert country, that
 the greatest part of their army died without
 fighting. It is said, that Darius afterwards
 invaded India : but there is no account of any
 battle fought, or town taken in that expedi-
 tion. The Ionians, sometime after, revolt-
 ing, were supported by several Grecian states ;
 but being deserted by the Athenians, they
 were compelled to submit to Darius, who
 transported an army to Greece, in order to be
 revenged of the Athenians for the assistance
 they had given the Ionians ; upon which Mel-
 tiades, the Athenian general, possessed him-
 self of a narrow pass near Marathon, in which
 the Persians, with a numerous army, endea-
 vouring to force them, the Athenians gained a
 complete victory, tho' the Persian forces were
 at least ten to one ; and the Persians fled over
 the Hellespont again, having lost a great part
 of their army, in the year of the world 3514.

The kingdom of Egypt revolting soon after,
 Darius made great preparations for invading
 Egypt and Greece at the same time ; but dying
 before his army was assembled, in the year of
 the world 3519, his son, Xerxes, who succeed-
 ed him, marched into Egypt, and compelled
 that kingdom to submit to his dominion ; and,
 in his return through Palestine, he confirmed
 all the grants his father, Darius, had made to
 the Jews.

Three years afterwards, Xerxes made great
 preparations for the invasion of Greece ; and,
 among

among other alliances, concluded a treaty with the Carthaginians, who engaged to invade the Grecian territories in Italy and Sicily by way of diversion. Xerxes having assembled an army of 3,000,000 men, near Sardis in Lesser Asia, marched at the head of them to the Hellespont, over which he laid a bridge of boats, that was destroyed by a tempest: he then caused a stronger bridge to be built, over which his army passed in the year of the world 3524. Thrace submitted to him as soon as he entered the country: but the Grecians seemed determined to die rather than to acknowledge him for their master. Leonidas, King of Sparta, with 4000 men, possessed the only strait thro' which the Persians must pass, known by the name of Thermopylæ, lying between Thesfaly and Phocis; here he waited the approach of this formidable enemy, and sustained several desperate attacks, in which the Persians lost 20,000 men: but a native of the country shewing the Persians a way up the mountain, which commanded the strait, the Persians took possession of it in the night-time; and the Spartans, seeing the Persians above them in the morning, were sensible it would not be possible to defend that pass much longer. Leonidas thereupon gave leave to the troops he commanded to retire, while he, with only 300 men, determined to remain in the strait, and sell their lives as dear as they could: but, before they were attacked, he invited his 300 men to dine with him, telling them, at the same time, that they must expect to sup with
Pluto,

Pluto, at which, it is said, they set up a general shout that made the mountain ring. Soon after an attack was made by the Persians, in which Leonidas and his 300 men were all killed, except one man, who escaped, and brought the advice of the action to Sparta; and was punished for cowardice, in not throwing away his life with his companions. The same day the action of Thermopylæ happened, Themistocles, admiral of the Grecian fleet, with 400 sail, defeated the Persian fleet, consisting of a 1000 sail; which defeat, however, did not hinder Xerxes from advancing towards Athens, whereupon the Athenians abandoned their city, and went on board their ships, after having sent their wives and children to Peleponnesus.

The Greeks now determined to fortify the Isthmus of Corinth, not doubting to defend that pass against all the power of Xerxes, especially as they were now masters at sea. Xerxes, in the mean time, continued his march to Athens, which he plundered and burnt; and seized upon those vast treasures that were laid up at Delphos, consisting of offerings presented to that oracle for many years, by most of the neighbouring kingdoms and states: but the Grecians gaining a second victory over the Persian fleet at Salamis, and a report prevailing that they were about to demolish his bridge over the Hellespont, and cut off his retreat, he retired precipitately to the shores of that sea, where he found the bridge actually

ally broke down, not by his enemies, but by a storm; and he was glad to pass the Hellespont in a small boat, and retire to Sardis, whither it is presumed great part of his army followed him: for it is said, he left but 300,000 men behind him, to continue the war, under the command of Mardonius, whom the Athenians and Lacedemonians, commanded by Aristides and Pausanias, defeated the year following at Platea, in which battle Mardonius, the Persian general, was killed, in the year 3525.

Xerxes was so enraged at these repeated defeats, that he caused all the Grecian temples in Asia to be burnt, except the temple of Diana at Ephesus; and then returned to his capital, where he was murdered by Artabanus, captain of his guards, and Methridates one of the principal Eunuchs, in the year 3532; and was succeeded by his third son Artaxerxes, the two eldest having been murdered by the same conspirators: however Artaxerxes was no sooner possessed of the throne, than he caused the conspirators to be executed.

Egypt revolting from the crown of Persia about this time, Artaxerxes had the good fortune to reduce that kingdom to his obedience again. It was this prince who assisted the Jews to rebuild the walls of Jerusalem. The Greeks carrying the war into Asia, and their generals meeting with great success there, Artaxerxes thought fit to make a peace in the year
of

of the world 3555, after the war had continued fifty years, on the following conditions : that the Grecian cities in Asia should be restored to their independency, and governed by their own laws and magistrates ; and that the Persian ships should not come into the seas of Greece. Artaxerxes died in the 49th year of his reign, leaving several sons behind him, who contended some time for the crown ; but, at length, Ochus, who assumed the name of Darius, was established in the throne. Darius, who died in the year of the world 3600, was succeeded by his son Arfaces, except in the province of the Lesser Asia, which Darius had given to Cyrus his younger son.

Cyrus, being born after his father was possessed of the crown, and his brother, Arfaces, before that event, imagined he had the best title to the throne, and was so enraged when he found his brother acknowledged Sovereign of Persia, that he attempted to assassinate him in the Temple, at the time of his coronation, for which he would have been put to death, had not his mother Parysatis prevented it. He retired afterwards to his government in the Lesser Asia, where he continued quiet for some time, till he had engaged a body of Grecian forces in his service, and assembled a numerous army of Persians, and then began his march towards the capital city of the empire, in order to depose his brother : when he came within several miles of Babylon, Arfaces, who had now taken the name of Artaxerxes, encountered

countered him, in the year of the world 3603, with an army of 1,000,000 Persians. Cyrus being killed in the battle, and his Persian troops routed, the 13,000 Greeks in his service, however, could not be broken by all the efforts of the royalists, but made their retreat into Greece, commanded by the celebrated Xenophon, in which he showed himself a consummate general; and the history of his retreat, written by himself, is esteemed one of the finest pieces of antient history extant.

Artaxerxes, dying in the year of the world 3642, was succeeded by his son Ochus, in whose reign Egypt and Phœnicia having revolted, he reduced them to his obedience again. In the year 3666, Ochus was poisoned by Bagoas, an Egyptian eunuch, who became a great favourite with this Prince. He afterwards poisoned Arses, the son of Ochus, who succeeded him, and advanced another Ochus to the throne, who is supposed to have been a stranger to the royal family; and being about to poison this Prince also, the King discovered his design, and made Bagoas drink the poison he had prepared for him.

This Ochus, who succeeded to the throne in the year of the world 3668, assumed the name of Darius Codomanus, in whose reign the Greeks, having determined to be revenged of the Persians for all the injuries they had sustained from them both in Asia and Europe, elected Philip, King of Macedon, for their
gene-

generalissimo, but Philip being soon afterwards murdered, his son, Alexander, succeeded to that post, being then about twenty years of age. This Prince having assembled an army of 30,000 foot, and 5000 horse, passed the Hellespont in the year of the world 3670; and, landing in Asia, fought the Persians on the banks of the little river Granicus, and gained a complete victory, though their army consisted of 100,000 Persians and 10,000 Greeks, after which the capital city of Sardis, and many more, submitted to the conqueror.

The next campaign, Alexander possessed himself of the Straits of Issus in Cilicia, where Darius attacked him with a very numerous army, and was totally defeated; his mother, wife, and several of his children being made prisoners, together with 300 of his concubines. After this victory, most of the cities of Palestine and Phœnicia submitted, except Tyre, which, having endured a siege, was at length taken by storm, and the inhabitants put to the sword. This dreadful example had such an effect on the towns of Syria and Egypt, that they immediately opened their gates to the conqueror. While Alexander was in Egypt, he visited the temple of Jupiter Ammon, whose son he pretended to be, and built the city of Alexandria, which afterwards became the capital of Egypt, and one of the greatest trading towns in the world.

Alexander, leaving Egypt, marched through Palestine, and passing the rivers Euphrates and Tigris, arrived in the plain of Arbela, where he encountered the Persian army again, and, in the year 3673, a third time defeated Darius, who fled to Ecbatana in Media, whilst Alexander took possession of the capital cities of Babylon, Susa and Persepolis. Alexander afterwards pursued Darius to Ecbatana, from whence that unhappy prince having retired before the conqueror arrived, was, upon the road to Bactria, murdered by Bessus, one of the generals of his army, whom Alexander afterwards put to death for his treachery to his master; and thus ended the Persian monarchy which had continued 209 years, computing from the beginning of the reign of Cyrus the Great who subdued Babylon.

Alexander, continuing his conquests, subdued Bactria; and invading India, he obtained a complete victory over Porus, one of the greatest princes in the East; but his army refusing to follow him farther, he was in a manner compelled to return towards Babylon, sending at the same time his admiral Nearchus with a fleet to the Persian Gulph. In his march he affected to imitate Bacchus, abandoning himself and his army to all manner of excess; and arriving at Susa, where he left the family of Darius, he married Statira the eldest daughter of that prince: but he still continued drinking and revelling, till he destroyed himself; he died at Babylon in the
year

year of the world 3681; and appointing no person to succeed him, his general officers divided his dominions among them, and assumed an independent sovereignty in the respective territories they possessed; and some of them losing their lives in the wars they made upon one another, they were at last reduced to three. Ptolemy possessed Egypt, Seleucus, the son of Antiochus, one of Alexander's generals, assumed the dominion of Babylonia and Syria, and built the city of Antioch, which he made the capital of his dominions; and Cassander reigned in Greece.

The posterity of Seleucus possessed great part of Asia for several hundred years: but it was at length split into a great number of subdivisions, viz. Persia proper, Parthia, Armenia, and Syria, each of which had their respective sovereigns; and the Romans afterwards possessed the Lesser Asia and Syria, and most of the countries west of the Euphrates,

The Saracens, successors of Mahomet, made a conquest of Persia, about the year of our Lord 630; and the Turks made themselves masters of it about the year 1000*: but were driven out by the Tartars and Scythians, who made a conquest of it about the year 1260. Tamerlane, the great Cham of the Tartars, conquered Persia and Turkey in Asia, about the year 1400. This prince, after the defeat of Bajazet, returning through Persia to Samar-

* See Vol. X. p. 143. & *seq.*

cand, with a great number of Persian captives, Cheik Aider, a Mahometan doctor, in high reputation in that country, obtained of him the release of most of his prisoners, which increased his credit with the people ; and Tamerlane leaving that country without appointing any governor of the western provinces, the Cheik gave out that he was lineally descended from Haly, the son-in-law and only lawful successor of Mahomet, and took upon him the title of Caliph, which includes both the spiritual and temporal jurisdiction. Ishmael Sophi, the son of Aider, succeeded his father, and, being a brave successful prince, was confirmed in the throne by the people ; and was afterwards succeeded by Sha Thomas, a very cruel prince, who was deposed by his subjects, and his brother, Codabundi, advanced to the throne.

Codabundi, dying in 1585, was succeeded by his son, Sha Abas, who enlarged the kingdom of Persia on every side ; he recovered the province of Candahor from India, reduced the kingdoms of Lar and Ormus, and expelled the Turks from great part of Armenia and Georgia : he was the greatest of this race of Kings ; and, having reigned forty years, was succeeded by his grandson, Sha Sephi, who proved a very cruel and tyrannical prince, and drank to that excess, that he destroyed himself after a reign of fourteen years. He was succeeded by his son Sha Abas the Second, who was no less addicted

to drinking than his father; and at length died of a fever occasioned by this excess, after a reign of one and twenty years.

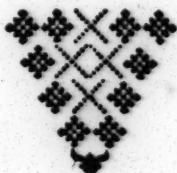
Sha Abas the Second was succeeded by his son, Sha Sephi the Second, who changed his name to Solyman; and, dying in July 1694, was succeeded by his son, Sha Hossain, who continued to reign in peace many years; but the court of Persia setting every thing to sale, during the reign of this prince, Mereweis Kan, a popular nobleman, purchased the government of Candahor, but was soon displaced to make room for another nobleman who advanced more money. Mereweis, upon this, breaking out into open rebellion, assembled his friends and dependants, and drove his rival out of Candahor; after which success, he began his march to Ispahan, the capital of Persia, but died before he arrived there.

Mahamood, the son of Mereweis, however advanced with the army to Ispahan, took that city, and murdered the King and all the royal family, except prince Thomas, who escaped, and fled to the north of Persia. Mahamood's usurpation was, however, but of short continuance, for he was murdered by Esriff, one of his officers, who usurped the throne. In the mean time prince Thomas assembled a body of troops, and was joined by a great number of royalists; and inviting into his service Kouli Kan, a nobleman and general of great

same on the frontiers of Usbec Tartary, defeated Esriff, took him prisoner, and put him to death. Kouli Kan, after the defeat of Esriff, marched against the Turks, and recovered all the places they had taken on the Persian frontiers; and, by treaty, prevailed on the Russians to evacuate that part of Persia they had possessed themselves of. These successes having rendered Kouli Kan very popular, he deposed his master Sha Thomas, put him to death, and usurped his throne, styling himself Sha Nadir, or King Nadir.

One of the sons of Mereweis, the first usurper, having possessed himself of Candahor, Sha Nadir laid siege to that city, which lying on the frontiers of India, he received an invitation, from a faction there, to march into that kingdom, which he very readily complied with, and the Mogul being betrayed into his hands, he marched to Delly, the capital of India, summoned all the Viceroy's and Governors of provinces to attend him, and bring with them all the treasure they could raise. Having, by these means, amassed the greatest treasure that ever any prince was possessed of, he returned to Persia, giving the Mogul his liberty, on condition of resigning the provinces, on the west-side of the Indus, to the crown of Persia. He afterwards made a conquest of Usbec Tartary; then marched against the Dagistan Tartars, but lost great part of his army in their mountains without fighting. He defeated the Turks in several engagements, but,

but, laying siege to Bagdad, was twice repulsed. He proceeded to change the religion of Persia to that of Omar, hanged up the chief priests, put his own son to death, and was guilty of such cruelty, that he was at length assassinated by his own relations, in 1747, upon which there appeared a multitude of candidates for the crown of Persia, most of them the relations of Sha Nadir, who are still contending for it.



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B E A U T I E S
OF
NATURE AND ART
DISPLAYED,
IN A
TOUR through the WORLD.

C H A P. III.
OF
I N D I A.

THE A. C. L. U.

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C H A P. III.

Of INDIA.

S E C T. I.

A general Account of INDIA.

THAT vast tract of country now generally known by the name of INDIA, and the EAST INDIES, is situated between 66 and 109 degrees of east longitude, and between 1 and 40 degrees of north latitude. It is bounded by Tartary on the north, by China and the Chinese Sea on the east, by the same sea and the Indian Ocean on the south; and by the Indian Ocean and Persia on the west.

India is distinguished into two general divisions, viz. India within the Ganges, and India beyond the Ganges.

India within the Ganges, called also Indostan, or the empire of the Great Mogul, is a peninsula in the Indian Ocean, situated on the

the west side of the Ganges. It is divided into five grand divisions. 1. The south-east coast, situated on the Bay of Bengal, called the Coast of Coromandel, contains the provinces of Madura, Tanjour, Bisnagar, Golconda, and Orixá, each of which provinces is denominated from its respective chief city. 2. The south-west coast of India, usually called the Coast of Malabar, contains the province of Decan, or Visapour, with its chief city of the same name, and the province of Cambaya, or Gusarat, the chief city of which is Surat. 3. The north-east division of India, comprehending the provinces of Bengal, on the mouths of the Ganges, and those of the mountains of Naugracut, contains the provinces of Bengal proper, the chief cities of which are Calicuta, a French government, or factory; Fort William, Huegly, and Dacad, English settlements, and Malda, a Dutch settlement; the provinces of Naugracut, of Jesuat, Patna, Nechal, Gor, and Rotas, each denominated from its respective chief city. 4. The north-west division, on the frontiers of Persia and the river Indus, contains the province of Soret, the chief city of which is Jaganal; the provinces of Jesselmere, of Tata, of Bucknor, of Multan, of Haican, and of Cabul, each of which is denominated from its respective chief city. 5. The middle division comprehends the province of Candish, the chief city of which is Medipour; the provinces of Chitor, Berar, Ratipor, Narvar, Gualeor, Agra, Delly, Lahor, Hendowns, Cassimere, Jengapour, and Asmer,

Asmer, each of which is denominated from its respective chief city.

This division of India contains also on the sea coast several fortified places, governments, and factories, belonging to the English, French, Portuguese, Dutch, and Danish.

India beyond the Ganges is also a peninsula in the Indian Ocean, situated on the east side of the river Ganges, and distinguished into the following four grand divisions. 1. On the north-west is the kingdom of Acham, the chief city of which is Chamdara; and the kingdoms of Ava and Aracan, each denominated from its chief city. 2. On the south-west are the kingdoms of Pegu, Martaban, Siam, and Malacca, retaining each the name of its chief city. 3. On the north-east, the kingdoms of Tonquin, the chief city of which is Cachao; and the kingdom of Laos, the chief city of which is Lanchang. 4. On the south-east, the kingdom of Cochin China, the chief city of which is Thoanoa; the kingdom of Cambodia retaining the name of its chief city; and the kingdom of Chiampa, the chief city of which is Padram.

The mountains of India are many: those of Caucasus, which have been mentioned already, divide the Hither India from Ussac Tartary; those of Naugracut separate India from the Tartars of Thibet; and the mountains of Balagate, which run almost the whole length of Hither India, from north to south, are so high,

that they stop the periodical western winds and rains, commonly called Monsoons; the rains beginning a month sooner on the Malabar coast than they do on the eastern coast of Coromandel. There are also mountains which run from north to south the whole length of the Farther India.

The chief rivers of India are, 1. The Indus, from which the country was probably named, and which, rising in the northern mountains, runs south, and, describing the western boundary of the country, falls into the Indian Ocean by several channels below Tata; receiving in its course the river Attock, supposed to be the antient Hydaspes. 2. The Ganges, which rising in the same northern mountains, runs south-east, and, after a course of 3000 miles, falls into the Bay of Bengal by several channels. 3. The Jemmina, which runs from north to south by Delly and Agra, and falls into the Ganges. 4. The Guenga, which, rising in the Balagate mountains, runs from west to east, and falls into the Bay of Bengal; and 5. The Christina, which rises also in the Balagate mountains, and running east, falls also into the Bay of Bengal.

The air of this vast tract of country, which stretches from 1 to 40 degrees of latitude, through a great many climates, must consequently be different in the southern from what it is in the northern provinces: the northern and midland provinces of India enjoy a fine, serene

serene, temperate air, while the southern provinces are parched with heats, which would be intolerable, were it not for the Monsoons, or fixed seasons of rain and wind, with which the countries lying in the Torrid Zone are cooled and refreshed. These regular winds on the coast of India, are observed to blow constantly six months one way, and six months another; namely, from April to October, or thereabouts, they blow from the south-west, and from October to April from the north-east, only varying now and then a point or two on either side. The shifting of these contrary winds, which is called the Breaking up of the Monsoons, is usually attended with violent storms or hurricanes, such as we very seldom experience in this part of the world, and which render the navigation of the Indian seas very dangerous at that time of the year. Besides these periodical winds, they have land and sea breezes, which shift once in twelve hours, except the Monsoons are violent, for then the breezes give way to the tempest; and it is these sea breezes that are so refreshing to the southern parts of India. During the rainy season, which continues several months, the clouds that obscure the heavens, defend the natives from the scorching sun. The rest of the year they enjoy a pure and serene sky, free from storms and hurricanes, and such as our climate does not afford us. The trees and plants retain a perpetual verdure, and ripe fruits and blossoms of one kind or other are to be seen throughout the year; so that the sight, the taste, and the
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smell, are constantly regaled in their delicious gardens.

Having mentioned the Monsoons, it may not be amiss to enquire into the reason of that extraordinary phenomenon. The cause then of these periodical winds is owing to the course of the sun northward of the equator one half of the year, and southward the other. While he passes through the six northern signs of the ecliptic, the vast countries of Arabia, Persia, India, and China, are heated, and reflect great quantities of the solar rays into the regions of the ambient atmosphere, by which means it becomes very much rarefied, and has its equilibrium of course destroyed; to restore which, the air from the equatorial parts, where it is cooler, as well as from the colder northern climates, must necessarily have a tendency or motion towards those parts, and so produces the Monsoons for the first six months, during which time the heat of those countries is greatest. Then for the other six months, the sun traversing the ocean and countries towards the southern tropic, the air over those parts is most heated, and consequently the equatorial air alters its course, or the winds veer about, and blow upon the opposite points of the compass.

To account for another phenomenon, viz. the General Trade Winds, which do not shift as the Monsoons do, but blow continually the same way, we must consider, that heat, by
rarefying

rarefying the air, makes it lighter in some places than it is in others, and cold by condensing it makes it heavier. Hence it is, that in the Torrid Zone, the air, being more rarefied by the rays of the sun, is much lighter than in other parts of the atmosphere, and most of all over the equatorial parts of the earth. Now as the parts most rarefied are continually shifting towards the west, by the earth's diurnal rotation eastward, it follows, that those parts of the air which lie on the west side of the point of greatest rarefaction, and flow to meet it, have less motion than the parts on the east of the said point, which follow it; and therefore the motion of the eastern air would prevail against that of the western, and so generate a perpetual east wind, if this were all the effect of that rarefaction. But as all the parts of the atmosphere are greatly rarefied over the equator, and those about the poles are greatly condensed by extreme cold, this heavier air from each pole is constantly flowing towards the equator, to restore the balance destroyed by the rarefaction and levity of the air over those regions. This being the case, it is easy to conceive, that by a composition of the two directions of the air from the east and north, a constant north-east wind will be generated in the northern hemisphere, as the two directions from the east and south will produce a constant south-east wind in the southern hemisphere, to a certain distance on each side the equator. And this hypothesis we find to be verified in the General Trade-Winds, which blow con-

stantly from the north-east and south-east to about thirty degrees on each side the line, where the parts are over the open ocean, and not affected with the reflection of the solar rays from the heated surface of the land; for in that case the air over the sea being cooler, sets in upon the land, as on the coast of Guinea, and in other parts of the Torrid Zone.

From what has been said, it is reasonable to conclude, that since so large a portion of the atmosphere as is over the Torrid Zone, and parts about it, is in such continual agitation and alternate motion, those agitations in an elastic fluid, as the air is known to be, must extend every way to a great distance, and produce effects of the same kind in a various manner; by which means the air in all other latitudes and climates will be more or less disturbed, and have a perpetual tendency to motion in various directions, depending on the situation of countries, the degrees of heat and cold in the climate, the position of hills, vales, &c. besides what may be owing to the accention and explosion of meteors, the eruption of subterranean air, and many other causes. This may give us a general idea of the origin of those variable winds that we experience in our own island, which blow sometimes one way, sometimes another, are now boisterous, now hushed, without any regularity, either as to time or place. Navigators do not find the winds variable in the great Pacific, Atlantic, and Ethiopic oceans, till they are about thirty degrees distant from the equator.

S E C T.





Elephant

The Elephant



S E C T. II.

A particular Account of the most curious natural Productions of India, in the Animal, Vegetable, and Fossil Kingdoms; and of other natural Objects of Curiosity.

A N I M A L S.

THE Elephant, the largest of all quadrupeds, and an animal, which, in many respects, merits our attention, is a native of India. It is a genus of that class of quadrupeds, called by Linnæus the Jumenta, the characters of which are, that the teeth are few in number, and disposed in an irregular manner; and often they differ from one another extremely in size and figure. The generic characters of the Elephant are, that there are no fore-teeth in the mouth; the upper canine teeth are very long; the anterior part of the head is furnished with a very long and flexible proboscis; the teats are two; and they are situated on the breast. Of this singular genus, there is only one species, which is the Elephant, and of which the size alone, had it no other distinctive character, would be sufficient to make it known from all the other quadrupeds in the world: but it has singularities of the most striking and obvious kind besides this. When at full growth, it measures from seventeen to twenty feet in height from

the ground to the highest part of the back, which is six or seven feet broad, and somewhat protuberant. The Elephant has a round thick body, a large short head, and a short neck; a long proboscis, snout, or trunk, hanging down almost to the ground; a little narrow mouth, with two long tusks proceeding from the upper jaw, one on each side of the proboscis; besides four strong grinders in each jaw; small piercing eyes, large flat ears, and a long tail. Its legs are round and thick, supporting its vast weight like so many columns; and its feet are short, those before being broader and rounder than those behind, each of them defended by four hoofs. Its skin is very hard, especially on the breast; its colour is generally dusky or black, but there is a white species, not so common as the others.

The proboscis or trunk of the Elephant is of such a structure, that he can extend or contract, dilate, raise or depress, and bend or twist it about at pleasure. Sometimes he makes it of a concave, sometimes of a convex form; now doubles it, again expands it, and in short turns it round every way with surprising agility. By this member he takes in his meat and drink, and conveys them to his mouth; by this he takes up a vast weight, levels trees, and makes use of it as a hand upon all occasions *; and it likewise

* It is really wonderful to observe how nimbly the Elephant moves his trunk, considering its bulk, being

likewise serves for the purpose of smelling and respiration. The proboscis is likewise of singular service to the She-Elephant in bringing up her young; for it is very remarkable, that the old one sucks herself, and by means of her trunk conveys the milk into the mouth of the young one. And herein we may observe the wise contrivance of the author of nature, the nipples of the Elephant being placed about the breast, and not near the hinder legs, as in mares, cows, and other quadrupeds; for the young elephant not being able to suck its dam by reason of the position of its mouth under the proboscis, the nipples are situated so as to be reached by the mouth of the dam, and thereby provision made for the nourishment of her offspring.

The grinders of the elephant are of such a thickness, both in the upper and lower jaw, as contributes to render the mouth narrow; nor need it be broader, because the strength of the grinders is so great, as to comminute the aliments at once in such a manner, that they

being six or seven feet long, and three feet or more in circumference at its origin, but growing smaller from thence to its extremity. The shortness of the Elephant's neck is compensated by the length of this member, which Dr. Derham says, is so admirably contrived, so curiously wrought, and applied with so much agility and readiness by that unwieldy creature to its several occasions, that he thinks it a manifest instance of the Creator's wisdom.

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do not want to be moved to and fro in the mouth, in order to be farther masticated, as is usual with other animals; and therefore the tongue is small, short, and round, not thin and flat, as in an ox, and has a smooth surface. As to the tusks of the Elephant, which are what we call ivory, the male has them larger than the female, some of them being seven or eight feet long, and weighing a hundred, a hundred and forty, or a hundred and fifty pounds; insomuch that Tavernier tells us, they make door-posts of them in the Indies, and it is related that in the kingdom of Laos they make fences with them round their gardens. The same traveller says, that the elephants of Ceylon have no tusks, except the first which the female produces; and this seems to be confirmed by Mr. Knox, in his account of that island, who says that few Elephants there have tusks, and those only the males.

History informs us, that the Elephants were used in war by the antients, and so they are at this day by several of the Indian princes *.
Tavernier

* This animal, being of great bulk and strength, has sometimes made great havock amongst an enemy in the field of battle; but whether any of them were ever so large as to carry thirty-two fighting men on their backs, as is related in 1 Macc. vi. 37, besides a man to govern them, is much to be doubted. It is more probable, as some learned men have observed, that some error has crept into the impression; for though Philostratus speaks of
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Tavernier was told that the Great Mogul keeps three or four thousand Elephants ; but the chief master assured him he had not above five hundred, which were kept to carry women, tents, &c. and eighty or ninety for war. This indeed is a great number of tamed ones ; from whence we may conclude there is a vast number of wild ones in his dominions, besides those in other parts of the Indies, particularly in the kingdom of Pegu, where we read of four thousand taken at one hunting ; but we are apt to think some abatement should be made in this account.

The natural food of the Elephant is grass, and when that is wanting they dig up roots with their tusks. They have a very acute sense of smelling, whereby they readily find out their food, and avoid all noxious herbage. When they are tamed they eat hay, oats, barley, or such other food as horses and oxen do ; and

ten or fifteen Indians fighting with darts in castles on the backs of Elephants, and Paulus Vineta says, that in the Ginger Islands they have wooden castles on Elephants backs containing fifteen or twenty men, yet even these accounts appear romantic to Bochart, and to all who are capable of judging in this matter. We rather believe, with Mr. Blair, what Heliodorus says, that the towers on the backs of Elephants contained six fighting men, who threw darts from each side ; or what Cadamustus relates, that the towers held three or four warriors ; which accounts agree well enough with what Ælian says on the subject, and with the usual height and bulk of the animal.

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they drink clear water readily enough, though they naturally affect that which is muddy. They drink a vast quantity, sucking it up by the trunk, and thence conveying it to the mouth. It appears to have been a custom to give them spirituous liquors when they went to battle, in order to make them drunk and furious *.

The Elephant is said to live to a great age, even to a hundred and twenty, two hundred, or three hundred years; nay, there are some who affirm that they live to be five hundred years old, and that at two hundred years they are full of strength and vigour. Some of these numbers exceed all probability, though the longevity of the animal is not disputed. Tavernier, who travelled in India, tells us, he could never learn exactly how long the Elephant lived, but that he was told by one of the keepers, that he knew such an Elephant to have been in his great grandfather's, grandfather's, and father's custody, which he modestly computes not to have been less than a hundred and twenty or thirty years. Mr. Blair allows, that the Elephant generally lives to a great age, though it is an animal subject to several distempers.

As to the manner of the Elephant's procreation, all agree that it is a creature of extraordinary modesty, and never copulates in the sight of any one. The time when they begin

* See the first book of Maccabees, ch. vi.

to copulate is likewise uncertain, though from their usual term of life it is conjectured that many of them do not begin till the twentieth year of their age, though others may much sooner. The time of their going with young is also disputed, nor is there any way of knowing it but by observing when they separate themselves from the herd, for they are gregarious animals, the male and female going apart for the sake of coition, and not returning till the female is impregnated. Some have fondly imagined, from their extraordinary bulk, that that they go with young nine years, others six, and others two; but it is most probable that the time of their gestation is fifteen or sixteen months, if we may judge of it by that of other viviparous animals, which is according to their bulk and term of life. Some say, they bring forth every third year, and others but once in their lives; but this last opinion is utterly improbable, considering the great number of these animals found in Asia and Africa. It is reported that they only bring forth one at a time, and that about the bigness of a calf; which size seems to agree with what Tavernier tells us, that when the merchants bring the Elephants to sell, the children leap upon their backs, which could not well be if they were higher. According to the same author, the male never meddles with the female after he is taken, but is sometimes seized with a lustful rage, or rather, as others think, with a kind of madness, known by the efflux of a liquor from their jaws like oil, which goes off again of its own

accord. Mr. Knox says, the female Elephants suckle indifferently the young ones of others as well as their own; but how long it is before the young Elephant quits its dam, is not easy to determine.

The Elephants take great care of their young, rather chusing to lose their own lives, than that they should theirs. They always go in herds, the largest foremost; and when they are to pass a river, they lift the young ones across on their two tusks, twisting the proboscis round their middle. When they find any of their species dead in the woods, they cover the carcase with branches of trees, grass, or what else they can get; and if one of them is wounded, the rest take care of him, bring him food, and run together to save him from the hunter.

The manner of taking Elephants is as follows. They dig deep pits and cover them with boughs, grass, &c. which though the Elephants sometimes perceive, for they are very sagacious, yet they frequently fall into the snare. Those, however, who happen to escape the danger, are ever after very distrustful, and will break off a branch of a tree with their trunk, with which they examine every step of their way, for fear of a pit under a deceitful covering. Another method of taking them, practised in the kingdom of Pegu, is to drive into the ground a great number of wooden piles, at such a distance from each other as to suffer a man to pass,

pass, but not an Elephant. They then let loose into the woods some tame females, to entice the males, who following the females, are led into the inclosure, and there confined and taken. Sometimes the King of Pegu employs a vast number of men to surround a whole forest where the Elephants haunt, and driving them all together into narrow bounds, he picks and chuses such as he has a mind to, and lets the rest escape.

If what authors relate of the manner of taming Elephants be true, it is a surprising proof of their natural sagacity. After they are taken, they are first inclosed in such a narrow place that they have scarce room to stand, and their fore legs and tusks are tied together. Then the keepers mount them, beat them with clubs, and kick them with their heels, threatening to starve them if they do not behave quietly, for they imagine the Elephants understand their language; but if they will be peaceable, they promise to be kind to them, and give them meat and drink in abundance. Having undergone this discipline, each wild Elephant is placed between two tame ones, and there confined till they are brought to the same peaceable disposition. Tavernier tells us, that he once saw two wild Elephants, each standing between two tame ones; and round about them stood six men, each with a half-pike in his hand, and a lighted torch fastened to the end of the pike, who talked to the Elephants, and fed them with hay, pieces of brown sugar, and rice boiled in water with a few corns of pepper.

pepper. If the wild Elephants refused to do as they were bid, the men make signs to the tame Elephants to correct them, which they did, beating them on the head with their trunks, till they forced the poor beasts to learn obedience. These methods, it is said, have soon an effect upon the younger sort of Elephants; but as for the old ones, they treat them more roughly, wounding them with darts, and keeping them without food till they are half starved, by which means they become tame and tractable. *Ælian* says, that when all other methods prove ineffectual, the old Elephants are tamed by playing on a certain musical instrument, with which they are much delighted. Be this as it may, it is agreed on all hands that the Elephant is an animal of great docility, and authors tell strange stories concerning them, such as their dancing to a pipe, and keeping time, leaping, skipping, gathering and strewing flowers, exercising a fuzee and pike like a soldier, and playing a great many odd tricks in theatres; nay, some pretend they have been taught to write, and understand human speech; but little credit is to be given to accounts of this nature.

History affords us several instances of the love, fidelity, and gratitude of the elephant, which are very surprising. *Ælian* relates, that when *Porus*, King of India, was subdued by *Alexander the Great*, he was wounded with several darts, which the Elephant he rode upon pulled out of his body with his proboscis, and when

when he perceived his master fainting by the loss of blood, gradually leaned himself down till he fell flat upon the ground, that his master might receive no harm by alighting. Athenæus mentions the gratitude of an Elephant to a woman that had done him some service, and used to lay her child near him when it was very young; for the mother dying, the Elephant was so fond of the child, that he shewed great uneasiness when it was taken out of his sight, and would not eat his food unless the nurse laid the child in the cradle between his feet, but then he would eat heartily. When the child slept, he chased away the flies with his proboscis, and when it cried he would toss or rock the cradle till it fell asleep.

But as Elephants are remarkable for their love and gratitude, so they are subject to wrath and revenge; and even the tamest of them retain some of their natural ferocity, which appears when they are provoked. Glycas tells us, that as an Elephant was led to a theatre, he saw in his way a keeper of wild beasts sitting in the market-place, whom in a passion he suddenly killed, remembering that the said keeper about ten years before had struck him with a sword in the same place. Acosta writes, that a soldier in Cochin, a town on the coast of Malabar, having thrown a nut at an Elephant, the beast took it up and hid it; and some days after, the Elephant seeing the soldier pass by, threw the nut in his face, making a great noise, and going away leaping and dancing. Another

soldier in the same town, meeting an Elephant with his keeper, would not give way to them; whereupon the keeper complained of the affront to the Elephant, who some time afterwards spying the soldier by the side of the river that runs through the town, ran hastily towards him, lifted him up with his trunk, and plunged him several times in the river; after which he drew him out, leaving him to be laughed at by the spectators.

The Rhinoceros, which is also a genus of the Jumenta, is likewise a native of India. The generic characters of the Rhinoceros are, that it has eleven fore-teeth in each jaw; there are no canine teeth: the nose is ornamented with a single or double horn, which is permanent. The Rhinoceros, of all quadrupeds, approaches nearest to the elephant in size, but is not equal to it in that respect; the body is nearly as bulky, but the legs are much shorter. A full grown Rhinoceros measures fourteen feet from the ground to the highest part of the back; and the legs are so remarkably short, that, with all their height, the belly comes near the ground: the head is very large and oblong, the ears are large and long, and in some degree resemble those of a hog; the eyes are very small, and do not stand on the upper part of the head, as in other animals, but at a small distance from the extremity of the snout; on the upper part of the snout, near the extremity of it, there stands a horn of a conic figure, and very strong; it grows to about two feet and an
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The Rhinoceros .



Michael Sauter

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half in length, and is a little bent backward; its colour is black, and its substance very firm and hard; the neck is short and very thick; the body rounded and enormously big; the legs are very thick and clumsy to appearance; the feet are broad and divided into toes; the tail is short, and furnished with some long and extremely thick hairs; the colour of the creature is tawny; the skin is remarkably thick, and hard; it is indeed so hard, that the creature could not easily turn itself in any direction, but that nature has formed a kind of joints and folds in it, by means of which it moves its body, though in an unweildy and awkward manner; it generally frequents the parts of the country which is farthest from the resort of men; it feeds on vegetables, and is, like the elephant, a native of Africa as well as Asia.

The Rhinoceros with a double horn is a species greatly resembling the former: at the upper part of the nose there grows a horn as in the other species, and just behind it another of the same form and colour, but smaller. The Elephant and Rhinoceros are said to bear such a hatred to each other, that they seldom meet without a battle, in which the Rhinoceros endeavours to pierce the Elephant's belly with his horn; but if he misses his aim, the Elephant is too hard for him, with his tusks and proboscis.

In several parts of the Indies, but chiefly in the kingdom of Golconda, there is a kind of
goats,

goats, in whose stomachs is generated a medicinal stone called Bezoar, composed of several laminæ or coats like an onion, and said to be endued with a power of resisting poison. These stones are of different shapes and sizes; some are formed like a kidney, or French bean; others are round, oblong, and of an irregular figure. The buds of a certain shrub, on which the animal brouzes, are sometimes found in the middle of it, and supposed to be the basis whereon it is formed. It consists of a greenish or olive-coloured substance, diversified with white streaks, which run through the whole body of the stone; and when broken between the teeth it adheres to them like a gently glutinous matter, and gives a little tinge to the saliva. The larger the stone, the more valuable it is held, its price increasing like that of the diamond; but perhaps its rarity, and the peculiar manner of its formation, have contributed more to its reputation, than any intrinsic worth. Many circumstances indeed contribute to render the medicinal virtues of Bezoar precarious, and not easy to be determined, as the uncertainty of procuring that which is genuine, it being much adulterated*, as is said, even in the Indies;

* There are three methods of trying whether Bezoar be sophisticated. One is, to steep it three or four hours in lukewarm water; if the water be not tinged, nor the Bezoar lose of its weight, it is genuine. A second is, to prick it with a hot iron, and if the heat makes it fry and blister, it is a proof of its being adulterated with resins. A third method

dies ; not to mention the large quantities that are made in Europe, in imitation of the true Oriental Bezoar. Again, the excessive price it usually bears, makes it inconvenient to exhibit it in a great number of cases, and that in sufficient quantities, and those long enough continued, to determine whether the virtues attributed to it are real or imaginary ; and yet without this test it is not possible to reason accurately or conclusively about it. However, at present it begins to be less esteemed, and many able physicians quite discard it, as of no manner of use or efficacy.

Besides the Bezoar abovementioned, there is another sort called Hog or Boar Bezoar, being found in the gall-bladder of a boar in the East-Indies. In figure and size it resembles a filbert, though more irregular ; it is most commonly white with a bluish tinge, is smooth and shining, and is valued at ten times its weight in gold. The Indians attribute infinite virtues to this Bezoar, but value it chiefly on account of its being a sovereign remedy in a disease they are liable to, no less dangerous than the plague in Europe.

There are also Porcupine and Monkey Bezoars, which some say are found in the gall-

method is, to rub it over a paper smeared with chalk or quick-lime ; if it leaves a green tinge on the former, or a yellow one on the latter, it is reckoned a proof of its purity.

bladders

bladders of those animals ; but Tavernier, who calls them Malacca Stones, says they are taken from the heads of the monkey and porcupine, and that they are held in such esteem by the natives of Malacca, that they never part with them, unless as presents to ambassadors and the greatest princes. But notwithstanding these distinctions, the form, colour, and properties of these three Bezoars are so much alike, that it is more than probable they are all the same stones under different denominations.

As to the Occidental Bezoar, it is taken from the stomach of an American deer, and is easily known from the Oriental, by being of a paler colour. There are likewise Bezoars found in the stomachs of certain cows, which are larger than those of goats, but less esteemed.

There is another kind of goat, or hart, according to some, pretty common in Tonquin, Cochin-China, and several parts of Tartary, which affords us that strong perfume we call Musk, the generation whereof has occasioned various disputes and conjectures. Musk is a pinguious and unctuous substance, not unlike grumous blood, of a blackish rusty colour, of a somewhat acrid and bitter taste, of a fragrant smell, and found in a follicle, bag, or tumour, situated near the navel of the animal. Some maintain it to be a purulent and excrementitious humour, collected and concocted in the bag ; and that the animal itself, which is
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of a lascivious disposition, by rubbing its belly against stones and trees, tears this bag, and so discharges the humour contained in it, which is coagulated by the air and sun into that substance we call Musk. Others will have it, that the Musk is not evacuated by any dilacretion of the follicule, but flows spontaneously through an excretory duct, allotted for that purpose. Others maintain, that the natives hunt and take the animal, and then cut off the bag, and dry the Musk in the sun, after which they put it up again in bladders for exportation. Others are of opinion, that Musk is blood extravasated and collected into apostems, by beating the animal till tumors and abscesses are raised, which being constricted, as it were, by a ligature into little bags, are afterwards cut out, and afford the Musk. Dale does not absolutely determine this matter, but takes Musk to be an excrementitious blood, which has undergone various concoctions and alterations in its proper follicule, and is either naturally secreted and collected by human industry, or contained in the follicule of the animal, when killed at a proper season : but the merchants have a fraudulent way of adding the blood, skins, and other parts of the animal to the Musk ; and with this mixture they stuff bladders, and sell it as true and genuine. The fraud, however, is easily discovered ; for if Musk evaporates when burnt, it is reckoned genuine ; but if there remains something like a coal, it is adulterated. Musk is of considerable use among
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perfumers and confectioners, though much less now than formerly. It has of late years been found by experience an excellent remedy in nervous disorders, particularly convulsions; and in fevers it has been given with great success, where sleep has been wanting.

The Civet Cat, an animal that yields the perfume called Civet, is a native of the East-Indies, as well as of Africa and America. It is a sort of wild cat, not much unlike our tame ones, except that his head more resembles that of a fox; his skin is spotted, his claws are less dangerous, and his cry different. The perfume this animal produces is an unctuous substance, of the consistence of honey or butter, and of a most fragrant and grateful smell. This perfume is not the seed, nor suet, nor sweat, nor testicles of the animal, as some would persuade us, but is a peculiar excrement secreted by nature, and collected in a little bag of a glandulous substance, seated under its tail, between the anus and pudendum. The Dutch, settled in the Indies, bring up a considerable number of these creatures, and furnish us with part of our Civet, which is taken from time to time as the receptacle fills, and abounds in proportion as the animal is fed. It is said they feed the Civet Cats with rice-milk, or pap, to render the perfume of a good consistence. Civet, like musk, is chiefly used by perfumers and confectioners, having but little place in medicine.

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The woods in some parts of the Indies are full of Monkeys, Apes, and Baboons, which are too well known in this country to require a particular description. The Baboon has a long face, like a dog's, is commonly black and hairy, has a rough skin, and his feet are armed with very strong nails. He mimics several human actions, especially in sitting and eating; and is of a very vicious disposition, and fond of women. What some authors call the Man-Tyger, and distinguished by a bunch of hair upon his head, and another under his chin, resembling a beard, is in reality nothing but a large Baboon. The Monkey partakes much of the subtle nature of the Baboon, is very mischievous and unlucky, and wonderfully nimble and expert in climbing. These creatures are of different sorts and sizes, according to the countries where they are bred; but those of the East Indies are most valued, on account of their being finely spotted.

The Ape is rather more mischievous than the Monkey, and much more fierce and cruel, so that he will even venture to attack a man, whom he perfectly imitates in several of his actions. There are divers kinds of Apes, as the Bear-Ape, the Fox-Ape, &c. so called from some resemblance they bear to those animals: and M. Thevenot tells us, that in Balagate he saw some Apes brought from Ceylon, which were no bigger than one's fist, and upon that account very much esteemed. They had a flat fore-head, large round eyes, which were

yellow and clear like the eyes of some cats, their snout was very sharp, and the inside of their ears yellow ; they had no tail, and their hair was like that of other Apes. When he looked upon them, they stood upon their hind feet, and often embraced one another, looking stedfastly at the people that stood by, without seeming at all frightened. The same traveller says, they have Sheep in Balagate without horns, which are so strong, that being bridled and saddled they carry children of ten years of age.

In the country about Surat there are Dun Buffaloes as big as the largest oxen, some of them are very fierce and mischievous ; insomuch that they will set upon men, and trample them under foot, but their horns are so turned that they cannot gore them.

There are also said to be beautiful Squirrels, finely streaked with white and black ; and they are much troubled in some parts with very large Rats and Mice, which are an over-match for their cats, and frequently burrow under their houses, and destroy their poultry.

The Salamander, a spotted animal shaped like a lizard, and famous for its living in fire, is a native of India, though not peculiar to that country. We have an account in the Philosophical Transactions, that a gentleman at Rome, named Corvini, having cast into the fire a Salamander brought from the East Indies,
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the animal presently swelled, and then vomited a quantity of thick slimy matter, which put out the coals, retiring to those that were extinguished, and putting them out again in the same manner as soon as they re-kindled; and thus saved itself from the force of the fire for the space of two hours, after which it lived nine months. This gentleman kept the Salamander eleven months, without any other food than what it took by licking the earth on which it was brought from the Indies, which at first was covered with a thick moisture, that was afterwards dried up, but moistened by the animal's urine. After it had thus lived eleven months, the owner had a mind to try how it would do on Italian Earth, but the experiment was fatal to the Salamander, which lived but three days upon the European soil.

Amongst the most beautiful and remarkable species of the feathered race that are to be found in the East Indies, we may not improperly reckon the Peacock, which, though common in Europe for two centuries past, seems to be of Asiatic origin. This bird is justly admired for the elegance of its plumage, which being so well known amongst us, we think it would be needless to describe particularly. The air of his head, the easy turn of his shape, the blended colours of the feathers of his body, the eyes and clouded spots of his tail, the gold and azure that shine in every part, the round of plumage he draws after him with so much pomp, and the very attention with which

he unfolds his ornaments to the spectators, have a singular and ravishing effect. The Peacock is so conscious of the beauty of his feathers, that he makes the wheel, as we call it, to display them in all their lustre, and is then reckoned an emblem of pride: but after all this external splendor, he has a disagreeable voice, which makes his company much less desirable than that of some birds whose music entertains us, though their cloathing is not so beautiful and dazzling.

The Parrot is a bird found in great numbers in the woods of the East Indies, and the warm parts of America. There are several sorts of Parrots, differing both in size and colour. The common Parrot has a large head, with a hard hooked bill, the upper part whereof hangs over the lower; and of this he makes great use in climbing and descending, first catching hold of any thing with his bill, as it were with a hook, and so drawing up his body and fastening his feet. The Parrot is the only bird, and indeed the only animal we know of, except the crocodile and gar-fish, that moves its upper jaw, which is immoveable in all other creatures. His tongue is broad, resembling that of a man, whose voice and speech he imitates better than any other bird, and has an excellent memory; insomuch that we are told by persons of credit, that Dr. Charleton, physician to King Charles the Second, had a Parrot that could recite great part of the mass, which had been taught him by a Portuguese priest, of whom

whom he was purchased. The feet of the Parrot are of singular fashion, not having three claws standing forwards and one backwards, but to each way, like those of the woodpecker. Some parrots live to a great age ; but as they are bred in warm countries, they are very tender in our cold winters. They are subtle and mischievous, and seldom forget an injury.

As there are such various species of the Parrot kind, that the curious have observed above a hundred sorts of them, we shall only describe two or three of the most remarkable. The yellow Lawry or Parroquet, brought from the East Indies, is about the bigness of a lark, having a bill of a grey colour, and very hooked. Its legs and feet are of an ash-colour, and its tail reaches eight or ten inches beyond the ends of the wings, the feathers being of a pale rose-colour, terminating in a lovely blue, or a mixture of white and green. Its belly, head, neck, and back, are of a beautiful reddish colour ; but the wings are chiefly green, intermixed with red feathers, one half whereof is variegated on each side with yellow, which exposed to the sun, shew a thousand varieties of shining colours, scarce to be expressed by a painter. These birds roost and build on the highest trees, and fly in flocks, making a great noise, but learn to pronounce few words, if any at all.

The Parroquet described by Mr. Waller, in the Philosophical Transactions, is a quite different species, having a short neck, black eyes,

a crooked bill, greyish legs and feet, and a tail no longer than the wings, the feathers of which near the quill are of a lemon-colour, next a scarlet for some space, then a narrow streak of green on some of them, after that a black, and green at the extremities. His breast and belly are of a fine light green, but his back and the feathers of his wings are somewhat darker. On his pinions are some short blue feathers, and several on his rump. His bill is encompassed up to his eyes with a broad scarlet circle, reaching also down to his throat; which circle in the hen is of a paler colour, like that of an orange, and is the only observable difference.

Mr. Waller, in dissecting one of these Parroquets, observed, that besides the gizzard it had two craws, the uppermost being only a receptacle for the food, which is Canary seed, to be again returned to the mouth, where it is re-chewed, having before been only husked, the animal ruminating like the cow and some other quadrupeds *. Their manner of chewing

* To ruminate, or chew the cud, as it is popularly called, is an action thought peculiar to some four-footed animals, as oxen, sheep, deer, &c. but besides what is here observed of the Parroquet, we have a remarkable instance in the Philosophical Transactions of a ruminating man who lived at Bristol. He would begin to chew his meat over again within a quarter of an hour after his meals, if he drank upon them; if not, it was somewhat later.

is thus : The under part of the bill being shorter, shuts within the other, or against the roof of the mouth, which is furnished with several rows of very small bars or ridges, like those in the mouths of dogs and horses. These bars are not soft but horny, being part of the upper bill ; so that the bird, by carrying the edge of the under bill and end of the tongue against the ridges in the upper, breaks and reduces to a pap, the seeds first moistened in the craw. The same gentleman took notice, that the wind-pipe of this bird differed from that of most other animals, having not only a larynx at the top thereof, as is usual, but another at its

later. This chewing, after a full meal, lasted about an hour and a half ; and if he went to bed presently after meals, he could not sleep till the usual time of rumination was over. The victuals, upon their return, tasted rather pleasanter than at first. Bread, meat, cheese, and drink, returned much of the colour as if they were mixed together in a mortar. Broth and other spoon-meats returned to his mouth all one as dry and solid food. The victuals seemed to the man to lie heavy in his throat till they had undergone the second chewing, after which they would pass clean away ; and he always observed, that if he eat variety of things, what he swallowed first, came up again first to be chewed. If this faculty intermitted at any time, it portended sickness, and he was never well till it returned. When this account was given by Dr. Slare, the man was twenty years of age, and had been so affected ever since he could remember. His father sometimes ruminated, but nothing near so much as the son.

entrance

entrance into the breast, where it is divided into two branches. From this structure, which is said to be common to all parrots, it may possibly be, that they can so readily imitate human voices ; and it being observed that parrots are ventriloquous, it perhaps may be owing to the assistance of the lower larynx ; for we may reasonably suppose that all ventriloquous cheats are framed by nature for such an imposture *.

The Maccaw is a beautiful bird, and the largest of all the parrot kind, being in length, from the tip of his bill to the end of the tail, about thirty inches, and its body is equal to that of a well-fed capon. The head, neck, breast, belly, and part of the wings and tail of the cock are of a fine scarlet ; the back, and the rest of the wings and tail, of a rich blue ; and the bill is so much hooked as to form an exact semicircle. His tail is about eighteen inches long, his legs short and thick, and his talons large, black, and very crooked. The colours of the hen are somewhat different ; but neither the hen nor cock has any merit but what consists in the beauty of their feathers,

* We call those persons ventriloquous, who speak inwardly, having a peculiar art of forming speech without opening the mouth, or at least without moving the lips ; so that the voice, proceeding out of the thorax, to a by-stander seems to come from a distance.

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The Crown Bird

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for they do not entertain us with their talk like the smaller parrots.

The Crown Bird, brought from the East-Indies, is a very fine fowl, as big as a large turkey. On the top of his head grow several shafts or stalks, having little round balls on their summits, not unlike those of an earl's coronet, of a yellowish colour. His bill is of a pale yellow, short, thick, and strong, a little bended; and just above it grows a small red comb. On each side of his head he has a red spot, and his body is covered with long feathers resembling hairs, of a dark-grey colour, having a purplish cast on the back and sides, some broad stripes of red on the wings, and the thighs yellow. He has a long neck and long legs, which are of a pale yellow colour, and his claws black.

The Amadavat Bird, so called from its being found near that city, in the Mogul's dominions, has a red bill, in shape like that of a goldfinch. His neck and back are of a dusky colour, but the feathers about the rump are of a scarlet or deep orange. The quill-feathers of the wings and those of the tail are black, which last are about an inch and a half long, and just twelve in number. In some of these birds the upper part of the breast is scarlet, in others wholly black, as is the rest of the breast and belly in all. The legs and feet are white, and the claws very long, like those of larks, but more crooked.

The

The Bengal Jay is a bird worth taking notice of, both for its colours and size, being somewhat larger than ours in England. The top of his head is blue, his neck and breast of an ash-colour, with a mixture of light brown and red. His wings are blue, as also his thighs and belly. The back and rump are of a greenish colour; the tail is of a dark blue next the rump and towards the extremity, but of a pale or bright blue in the middle. The legs and feet are of a yellowish brown, and the claws black.

We are informed by the Jesuit missionaries, that in the kingdom of Siam there is a sort of birds called Criel Herons, which swarm upon the trees, and look like blossoms at a distance, it being a small bird with tufts of white feathers upon the head, back, and belly, which render it extremely beautiful. There is likewise a remarkable insect called a Fire-Fly, having four wings of a bright flame-colour, two of which only are to be seen when they fly, and the other two when they rest. The trees near the rivers are almost covered with them, and in the night they appear like so many lights upon the leaves.

In Cochin-China there are certain birds, somewhat like swallows, whose nests may be reckoned one of the greatest curiosities of the Indies, being eatable, and much used in sauces by the inhabitants of that country. These birds build their nests among the rocks on the
sea-

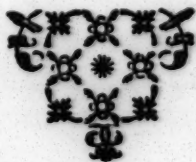
sea-coast, which are much in the form of our swallows nests, and consist of several coats or layers one upon another ; but instead of clay or dirt, they are composed of a sort of gum or froth of the sea, mixed with a juice or liquor proceeding from the stomach of the bird, which composition hardens in the sun, and becomes almost transparent. These nests the natives gather in great quantities at the proper season of the year, probably when the birds have done with them and forsaken them, and frequently use them in the following manner: Having steeped them in warm water till they are soft, they tear them into small pieces, and mixing them with little bits of Ginseng, a root or plant to be described when we come to China, they put the mixture into the belly of a pullet, which they boil in a pot or pipkin close covered, and leave it over the fire all night. In the morning they eat the pullet, the Ginseng and bird-nests making excellent sauce, without any other seasoning. Sometimes they use these nests by way of medicine, to promote sweat ; but they generally mix them in their sauces, to which they give an admirable relish. They are very nourishing, but to some people the taste is not so agreeable ; though Borri, a Jesuit missionary, applauds them as a most delicious food ; and Tavernier, who often eat of it, thought it a worthy present to persons of the highest quality.

There are two kinds of Bats in the province of Malvay, in the Mogul's dominions, the one like

like those we have in Europe, the other much different, as described by M. Thevenot, who had the opportunity of examining one which was kept by a friend of his out of curiosity. It is about eight inches long, the body round, as large as that of a duck, and covered with yellowish hair, but none grows upon its ears. It has a sharp snout, and its head and eyes resemble those of a cat. It has no tail, but under the wings there are two teats as big as the end of one's little finger. Its legs, or arms, as some call them, which are four in number, seem to be fastened within the wings, which are joined to the body along the sides from the shoulder downwards. The wings, when extended, measure from point to point about two feet, are seven or eight inches broad, and consist of a black skin, which looks somewhat like wet parchment. The two fore legs are nine or ten inches long, covered with hair, and terminating in five toes or fingers, which make a kind of hand. They are without hair, and have the same joints as a man's fingers have, and the animal makes use of them to stretch out his wings when it has a mind to fly. The hind legs are but six inches long, are hairy, and the feet, as the others, pretty much resemble a man's hand, but that they have claws instead of nails. These Bats fly a great height, and are frequently seen clinging to the branches of trees with their talons. People who have tasted them say they are good meat, notwithstanding their disagreeable aspect.

To

To these animals of the East-Indies might be added several venomous serpents, particularly one of a silver-colour, about twelve inches long, found in the kingdom of Siam, whose bite throws the patient into convulsions in an hour's time, and infallibly carries him off without a speedy remedy. But we are told the natives have an excellent antidote for this venom, viz. an artificial stone, which being applied to the wound, sticks to it immediately, after which the convulsions cease, the patient recovers his senses, and the stone, having extracted all the poison, drops off of itself. It is said that when the stone has been thus applied, it must be steeped twenty-four hours in the milk of a woman's breast, whereby it recovers its virtue, and is fit to be used again upon the like occasion.



V E G E T A B L E S.

AMONG the many vegetable productions of India, perhaps none is of more general use, or makes a more considerable article of commerce, than pepper, which is the fruit of a plant, or shrub, growing plentifully in Malabar, Malacca, and other parts of the continent, as well as in several of the islands. This plant is weak, and of the reptile kind, so that it is set at the roots of large trees, round which it twists, and climbs like hops. Its leaves in figure resemble those of ivy, but are larger, and not so green, of a strong smell, and pungent taste. In April, it bears a white flower, after which the pepper comes forth, in small clusters, like our currants, being green at first, and becoming red, in proportion as they ripen, and at last black, when they are quite ripe, which is in November, or December. The clusters are then cut off, and dried for a fortnight, on mats in the sun, till the pepper falls off from the stalk; during which time, they are often turned, but covered in the night-time, because of the dew. It is said, the plant bears no fruit till the third year, when it produces six or seven pounds; and the two following crops are much the same, after which it increases both in quantity and size till the twelfth year, when it bears no more, and a new shoot is planted in its room.

Pepper

Pepper is distinguished into two kinds, the black, and the white, which Pomet and others will have to be the fruit of two different plants; but M. Dillon, a celebrated physician, and author of the history of the inquisition of Goa, assures us, that all the difference between the white and black pepper is, that the latter has its skin, which is taken off from the former, by beating it before it is quite dry, or after it has it been soaked in water.

There is another kind of pepper growing in the East Indies, called Long Pepper, from its form, which in length and thickness equals a child's finger. It consists of an assemblage of grains or berries sticking close together, of a brownish colour, bordering on red without, and on black within. The plant that bears it is like that of the common pepper, but its leaves are smaller and greener; and as to the fruit itself, its taste is less sharp than the former. It is chiefly used in medicine, being an ingredient in several Galenical compositions, particular Venice treacle.

Though rice is not peculiar to the Indies, yet being the principal grain of those countries, and throughout the east, it seems more proper to mention it here, than in any other place. It is the seed of a leguminous plant, growing in clusters, being terminated with a beard, and severally inclosed in yellow Capsulæ or cases. When stript of their skin, the grains appear almost oval, of a shining white colour,

and as it were transparent. In the Indies, the women thrash, and dress all the rice, which is a very painful office. This grain, which is the food of at least two thirds of mankind, is undoubtedly a very wholesome aliment; and as to what has been said, that living much upon rice, is injurious to the eyes, and brings on blindness, the judicious look upon it as a vulgar error.

The Ananas, or Pine-Apple, as we call it, from the resemblance it bears to the cones of pines and firs, is a most delicious fruit, which grows spontaneously in the warm parts of the East Indies, as well as in America. It is the product of an herbaceous plant, with leaves like an aloe, and the top of the fruit is adorned with a little crown, and also with a bunch of leaves. The pulp is fibrous, but dissolves in the mouth, and has the fine taste of the peach, the quince, and the muscadine grape, all together. It is said, the Indians make a wine of the juice, which is almost equal to Malmsey sack, and will intoxicate as soon. The fruit is esteemed cordial, good against a nausea, raises and exhilarates the spirits, and provokes urine; but is not proper for women with child, being apt to occasion abortion. A confection of the Ananas is made in the countries where it grows, which is found of service to restore a decayed or broken constitution. Great endeavours have lately been used to cultivate the plant in Europe, which have been attended with such success,
that

that very fine fruits of this kind are now produced in England, in the gardens of the curious. They are usually about the size of a tennis-ball, but some are much larger.

The Coco, or Cocoa-Tree, is one of the most remarkable and useful productions of the Indies. This tree grows strait without any branches, till near its summit, and usually to the height of thirty or forty feet. The leaves, which are of a great length, and terminate in a point, serve the Indians to cover their houses with, and for many other purposes. Above the leaves, arise several shoots, as thick as a man's arm, and on the top of all grows a large excrescence, in form of a cabbage, excellent to eat, and far exceeding our finest cabbages in flavour. From the sides, and upper part of the cabbage, there likewise shoot out clusters of pods, containing some small kernels, tasting exactly like the English walnut. The nuts, which are the fruit of the cocoa-tree, hang in clusters four or five together, and are as big as a man's head, when at full growth. Before they are ripe, they contain a clear cooling water or milk, which in time condenses to a pulp, and becomes an excellent food ; and it likewise affords an oil, equally good either for the lamp or the table. The shell of the nut is made into bowls, spoons, and several other utensils : and in the kingdom of Siam, they are used as measures for things, either dry or liquid. From the cocoa-tree, the Indians extract a liquor, called

Suri, which is of a grateful taste, and intoxicates like wine. It is pretty sweet, when newly extracted, but in a little time becomes more acid; and from this liquor, is distilled a water or spirit, that burns in the fire like brandy. The Suri, we apprehend, is the same liquor that some authors mention under the name of Toddy, from whence Mr. Lockyer assures us they distil the spirit we call Arrac, which is the Indian word for all strong waters. * The method of obtaining the Suri, is by making an incision on the top of the capsule, that bears the flowers or fruit, and about four inches below, they make an oblique incision in the bark, from whence the liquor drops into a vessel hung to receive it. What is obtained in the morning, is sweet and pleasant, and even more delicious than the milk of the nut; but that in the evening is somewhat acid; the next day it grows sourer, and on the third day it is entirely acid, and without any sweetness at all. In order to make vinegar of this liquor, they put the vessels that receive it among lime, for fifteen days, by which a violent fermentation being excited, much froth thrown up, and a whitish matter subsiding to the bottom, the Suri is changed into vinegar. A sort of sugar

* Goa and Batavia are the chief places for arrac. What is made at Batavia, is much the strongest, but that of Goa is preferred to all others, on account of its peculiar and agreeable flavour; which is attributed to the earthen vessels used at Goa, to draw the spirit, whereas at Batavia they use copper stills.

called

called Jagra, is likewise prepared from the Suri, by putting into it a sufficient quantity of lime, to tinge it of a reddish colour. The liquor is then boiled, and stirred continually till it is inspissated; whereby a red sugar is produced, which they render white by repeated dissolutions and boilings.

As to the medicinal virtues of the Cocoa, the Suri is said to be highly beneficial to phthical patients, or those who labour under any disorder of the kidneys, or a difficulty of discharging their urine. The liquor contained in the nut, is good to extinguish thirst, purifies the blood, cleanses the stomach, affords much nourishment, and is an excellent drink in biliary fevers.

There is a remarkable species of palm-tree called Areca, which is common in Siam, and other parts of the Indies. The trunk of this tree is strait, and without branches, like the Cocoa; its leaves grow in the same manner, and it bears a fruit with a green covering, of the bigness and shape of a pullet's egg. This covering, or rind, consists of numerous fine filaments, running lengthways, from the stalk to the head, under which is contained the fruit or nut, externally of a brownish colour, shaped like a nutmeg at one end, but flattish at the other. It is white within, and marbled with purplish veins, but has very little taste. The Indians chew this nut wrapped up in a betel leaf, with lime made of calcined shells,

shells, which they affirm to be a mixture of a grateful taste, strengthening the gums, and promoting digestion.

The Betel, or Betle, just now mentioned, is a plant that grows in all the Indian provinces on the sea-coast. The Indians chew it in the morning, afternoon, and evening, and carry it about with them almost continually ; but they use the nut and lime with it to qualify its bitterness. Some of the rich people use it with camphire, and others with aloes-wood, musk, and ambergrease. It is said to strengthen the gums, and to corroborate the heart, stomach, and brain. If chewed immediately after breakfast, it renders the breath agreeable; but it blackens the teeth, and in time corrodes and loosens them.

The Lacca-Tree, which grows in Malabar, Pegu, and other parts of India, is remarkable for the gum it yields, called Lacca, or Lake, which is red, brittle, and clear, used in dying, painting, &c. Authors indeed differ as to the production of this curious drug, some imagining it to be a juice drawn from the tree by incision, whilst others, and particularly father Tachard, affirm, that a kind of little ants, fixing themselves on the branches of the tree, leave behind them a reddish moisture, which being hardened by the air and sun, becomes Lacca. M. Geoffroy, examining this gum, found it to be a sort of comb, such as bees and some other insects are accustomed to make.

Upon

Upon breaking it into pieces, it appears divided into a multitude of little cells, of an uniform figure, which plainly shew that it never ouzed from trees. Nor are these cells mere excrements, as some have imagined, but are intended for something to be deposited in them; and accordingly are found to contain little bodies, which the first observer took for the wings, or other parts of the insects that produced the lacca. These bodies are of a beautiful red colour, and, when broken, make a powder as fine as cochineal. It is most probable that the cells are destined to lodge the young brood, and that the little bodies found in them, are the embryo's of insects, or perhaps their skins. This is Lacca, in its natural state, but to prepare it for use, they pound it in a mortar, and boil it in water, to a proper consistence; after which, part of the water is evaporated by the sun, and the thickned tincture strained through a linen cloth. Besides this, there are several artificial pastes, used by painters, which go by the name of Lake, or Lacca.

The Lignum Aloes, or Aloes-wood, much used in the east as a perfume, has its name from its bitterness, which resembles that of the aloes juice. This wood is extremely valued, and divers strange stories have been invented as to the origin of the tree that yields it, some feigning it grew only in Paradise, and was swept away by the deluge; whilst others assert, that it grows in deserts, and on inaccessible rocks

rocks and mountains, guarded by wild beasts, &c. The Siamese ambassadors to the court of France, in 1686, who brought a present of this wood from their emperor, first gave the Europeans a consistent account of it. The tree grows in Laos and Cochinchina, and is much of the same size and figure of our olive-trees. The trunk consists of three sorts of wood, very different in colour and properties, that which lies immediately under the bark, being black, solid, heavy, and almost like ebony. The second, which is a light veiny wood, and of a tan colour, is the Calambac, or true Aloes-wood, which is brought to us from Surat, in considerable quantities. The heart, or innermost part, called Tambac, is more valued by the Indians than gold itself, and is therefore very scarce and dear. The Calambac comes to us in small pieces, of a yellowish brown colour, with black or purple-coloured resinous veins, interspersed, and is of a bitter, hot, aromatic taste; and when cast on the fire, it melts like wax, and yields a very fragrant scent. It is not only used as a perfume, but esteemed a sovereign remedy in pallsies, deliquiums, weaknesses, &c. Chewing this wood, or rinsing the mouth with a decoction of it, sweetens the breath, according to Dioscorides; and the weight of a dram powdered, and drank in some proper liquor, cures the excessive humidity, relaxation, and burning heat of the stomach, commonly called the Heart-burn. It likewise relieves those af-

flicted

affected with a dysentery, or gripes, or with pains of the side or liver.

In the province of Tatta, in the dominions of the Great Mogul, there grows a wood, called *Lignum Dulce*, or Sweet-wood, though indeed it is rather a weed, no part of it being useful but the root, which is a good ingredient in perfumes; and therefore great quantities are exported from Surat to China, where it bears a good price; because, when beat to a powder, it is burnt in the incense-pots before their idols.

The same country, and other parts of the Indies, afford us a drug of a quite different scent, namely, *Asa Fœtida*, which is a gummy resin, brought to us in lumps of different colours, white, yellowish, bluish, or brown, which last is the worst of all. It is not well known from what plant this gum is procured; all that has been advanced on that point by naturalists amounting to little more than conjecture. However, it is generally said to distil spontaneously, during the heat of summer, from a little shrub, frequent in the eastern countries. It is justly accounted an excellent remedy in all hysteric disorders, and is good to excite sweat, and strengthen the stomach; but its fetid offensive smell occasions it to be seldom used, though in the East Indies it makes an ingredient in their ragouts.

There

There is another gum or resin, which, in opposition to the former, is sometimes called *Asa Dulcis*, but commonly *Benzoin*, or *Benjamin*. This is obtained by incision, from a tree growing in the East Indies, to a considerable height and thickness, and bearing leaves like those of the lemon-tree, but smaller, and not so green. The gum, as brought to us, is generally very foul, sometimes of a reddish, and sometimes of a yellowish colour, of an agreeable taste and aromatic smell. The true *Benzoin*, brought into France by the ambassador of Siam's retinue, was externally yellowish, but white within, and intermixed with small reddish veins. It differed very much from the *Benzoin* in tears, as it is called, which is a clear transparent mass, of a reddish colour, and mixed with white spots, resembling broken almonds, whence it has the name of *Amygdaloid Benzoin*. The druggists have another sort, which is often counterfeited by a fusion of several gums together; and there is a black kind of *Benzoin*, without any smell, which is absolutely to be rejected.

This gum is much used in perfumes, and most authors agree that it is of a warming, drying, dissolving, dissolving and purifying nature, resisting putrefaction, and good against disorders of the breast and lungs. Externally it is used in all fragrant compositions; for it proves cordial by its agreeable smell, fortifies the senses by its steam, dissipates defluxions, and cures the tooth-ach.

In several parts of the Indies, the Tamarind-tree grows plentifully, which bears a tart agreeable fruit, by some called Indian Dates, and by others, the Indian Acacia. The bark of this tree is not unlike our ash, or walnut-tree, and its leaves resemble those of the female fern. Its flowers are joined eight or ten together, like those of the orange-tree; and its fruit is in a pod, the length of one's finger, and somewhat thicker, covered at first with a green rind, which afterwards becomes brown, and contains a blackish acid pulp, among which are found seeds, resembling lupines. This pulp is used in medicine, being gently laxative, cooling, and proper to quench thirst, and therefore very serviceable in burning fevers. Tamarinds are also good in Diarrhæas, and are commended in a flux of the hæmorrhoids from a bilious and acrimonious blood.

We have another sort of medicinal fruit brought from the East-Indies, called Myrobalans, which were more used among the ancients than the moderns, and are at present more esteemed abroad than in England. There are five kinds of this fruit; the first called the Indian, or black Myrobalans, which are more slender and narrower than any of the rest, with eight ridges upon the superficies. These have no stone, are rough, hard, black both within and without, and of a sub-acid and astringent taste. The second is the Citron, or yellow Myrobalan, which is a pentagonal rough fruit about the size of an olive, having

an angular stone included under a carnos bark. The third sort is the Chebule Myrobalan, a rough pentagonal fruit, with five ribs on its surface, including a cavernous stone under a fleshy bark, like the former. The fourth is called the Belleric Myrobalan, which is a round and somewhat angular fruit, about the bigness of a large gall, and containing a hard stone. The fifth, called the Emblic Myrobalan, is a black sexangular fruit, flat at each end, and easily separating into six parts, containing a white hexagonal stone, divided into six cells. All these kinds are gently purgative and astringent, and therefore very proper in diarrhæas and dysenteries.

The plant from whence Indigo is drawn, grows in several parts of the Mogul's dominions, as well as in America. It somewhat resembles rosemary, and rises to the height of three or four feet, some say six or seven, bearing a flower like that of the thistle, and having a seed like a fenugreek. When the plant is arrived at a certain height, and the leaves are in a good condition, they are stripped from the stalks, and thrown into large pits, as Tavernier informs us, half filled with water. Here they are bruised, and stirred about till the water appears very thick and muddy, and after a few days settling, the water is drawn off, and the slimy sediment taken up in baskets, which is made up in pieces, shaped like children's tops, or in flat cakes, and afterwards dried in the sun. The people employed to sift the Indigo,

digo, stop their nostrils, keep a cloth before their faces, with little holes for their eyes, and drink milk every half hour, to preserve them from the penetrating quality of the dust; which, notwithstanding all their precaution, makes them spit blue for some time after *.

This is the method of making indigo, at Zirkes, a large village near Amadabat, which is reckoned as good as any in the world; but some travellers give us a different account of its preparation in other places. The leaves of the plant, they say, are thrown into a kind of vat, and covered with water, in which they are boiled for four and twenty hours, and a scum swims on the top with all the different colours of the rainbow. The water is then drawn off into another vessel, where it is briskly stirred about, till it becomes of a deep green, and till the grain, as they call it, forms itself. This they discover by taking a little of it out, and spitting in it; for if that occasion a bluish matter to subside, they leave off stirring the liquor. The matter then precipitates itself to the bottom of the vessel; and when it is well settled, they pour off the water. After this, they take out the indigo, and put it into linen bags to drain; which done, they put it into shallow wooden boxes, and

* Tavernier tells us, he placed an egg one morning near the sifters of indigo, and found the contents of it quite blue, when he broke it in the evening.

when it begins to dry, they cut it into slices, and let them harden in the sun. Indigo is much used by painters and dyers, and it is of some use in medicine, particularly in stopping of fluxes, being a very strong astringent.

In Malacca, besides the common fruits of the Indies, they have the Mangostan, a delicious fruit, almost like an apple, the rind whereof is thick, and of an astringent quality. It has kernels like cloves of garlic, of an agreeable taste, but very cold.

They have also the Rambostan, another fruit, about the size of a walnut, with a tough skin, covered with capilaments, and containing a very savoury pulp. The Darean is another excellent fruit of that country, which indeed is offensive to the nose, but most grateful to the palate. Its rind is thick and yellow, and its pulp looks like cream, but is more delicious. It is warm and nourishing, and strengthens the stomach. There is likewise plenty of Mangoes, and particularly a species called Stinkers, being very offensive both to the smell and taste.

We had almost omitted one of the most remarkable trees that India produces, namely, the Banian-tree, so called from the veneration it is held in, by the Banians *, a religious sect in

* The Banians believe a metempsychosis, or transmigration of souls, from one body to another, and

in that part of the world. The branches of this tree bend down to the ground, where the slender twigs take root and grow upwards; the branches of these bend down likewise, take root, and grow up again; and by this means what was originally but one tree, will spread over a vast space of ground, and become a multitude of trees, forming, by the manner of their growth, very delightful arbours and arches. Thevenot saw one of these trees at Surat, which he says was very large and high, affording a most spacious shade, being of a round form, and fourscore paces in diameter. The branches, which had taken root irregularly, were cut with so much art, that one might walk about underneath them without the least inconvenience. The heathen natives frequently make use of these trees as places for their idols, and retirements for their penitentiaries, and other persons, who seem in a more particular manner to be devoted to the exercise of religion.

and will therefore eat no living creature, nor will kill noxious animals, but endeavour to release them, if they see them in the hands of others. They are so fearful of having communication with other nations, that they break their cups, if one of a different religion has drank out of them, and empty the water out of a pond where he has washed himself. Nay, it is said, that if they happen to touch one another, they must wash and purify, before they eat, or enter their own houses.

In the woods of Cambodia, Capt. Hamilton informs us, there grow certain trees with a thick bark, of a very poisonous quality, inso-much that the natives use it to poison the flugs they shoot at elephants, or other wild beasts, which certainly kills them, if they do not miss their mark. The captain observes, that this subtle poison has another strange quality, that if men are hungry or thirsty, as is often the case in the woods, they squeeze a few drops of it on a leaf of a tree, and if they barely lick the leaf, it gives immediate refreshment, but if the juice touch any part where the skin is broke, it proves mortal without remedy.

What we call Nux Vomica, is the stone of the fruit of a tree, growing in Malabar, and several other parts of the East-Indies. The fruit is as big as an orange, and very slimy; and as vast quantities of them rot on the ground, it makes the water that runs through the woods very unwholsome. This stone or seed is round and flat, of a grey mouse-colour without, and of various colours within; sometimes yellow, sometimes white, sometimes brown. It is extremely narcotic and virulent, exciting inquietudes, convulsions, tremors, and irregular respiration; and therefore is not, or at least ought not to be, used in medicine. It is chiefly employed in poisoning dogs, cats, and other animals, by a barbarity peculiar to mankind.



F O S S I L S.

OF all the bodies of this class that the Indies afford, the Diamond deservedly claims our first attention, as it far exceeds all other gems in value, hardness, and lustre. The diamond, in its most perfect state, is clear and pellucid, as the purest water, and is eminently distinguished from all other substances, by its vivid splendor, and the brightness of its reflections. However, it is not unfrequently found tinged with a yellowish, bluish, redish, and sometimes a greenish cast, by the accidental mixture of some metalline particles; but the tinges are usually slight, and in these states it is extremely different from other gems of those colours, being of infinitely greater lustre. The diamond is found of various sizes, but generally small, the large ones being very seldom to be met with*; and as its size is un-

* The largest diamond ever known to have been found in the world, is that in the possession of the Great Mogul, which weighs 279 carrats, each carrat being four grains. Tavernier computes the value of this diamond to be 11,723,278 French livres, equivalent to 779,244 pounds sterling. That of the Great Duke of Tuscany, weighing 139 carrats; and that in France, called the Grand Sancy, weighing 106 carrats, the name *Sancy* being a corruption of *cent six*, which is one of the crown jewels, are two of the heaviest that we know of in Europe.

certain

certain and irregular, its shape is much more so; but all its varieties of figure are found no way to affect the internal structure of the body, which by the microscope appears to consist of a great number of parallel plates or tables, extremely thin, and laid over one another with the utmost regularity.

Diamonds are found in the East-Indies chiefly in the kingdoms of Golconda, Visapour, Bengal, and the island of Borneo. The diamond-mines are generally adjacent to rocky hills and mountains, and sometimes the diamonds are found scattered in the earth within two or three fathoms of the surface. In other places, they sink through rocks to the depth of forty or fifty fathoms, till they come to a sort of mineral earth, in which they find the diamonds inclosed. This earth is sometimes of a yellowish, and sometimes of a reddish colour, and adheres to the stone so strongly, that it is difficult to get it off. A sufficient quantity of this earth being dug out of the mine, it is thrown into a cistern of water, where having soaked for some time, it is stirred about till the clods are broken, and the gravelly matter falls to the bottom. After this, a vent is opened, the foul water let out, and the cistern supplied with clean, till all the earthy substance be washed away, and nothing but gravel remains. What thus settles at the bottom, is spread to dry in the sun, then sifted, and afterwards carefully searched with the hands, to find out the diamonds; at which they

they are so expert, that the least bit of a stone can hardly escape them. It sometimes happens, however, that the earth is so fixed about the diamonds, that before they are rubbed on a rough stone with sand, their transparency cannot be discovered.

In the kingdom of Golconda, or in that of Visapour, according to some maps, are the mines of Raolconda, which have been discovered above two hundred years. The earth here is sandy, and full of rocks, and in these rocks are found several little veins, half an inch, or an inch broad, out of which the miners, with hooked irons, draw the sand or earth that contains the diamonds, breaking the rock when the vein terminates, that the track may be found again, and continued. To separate the diamonds from this earth, it undergoes several washings, and other operations, as we have already observed. The miners work quite naked, except a thin covering over their privities, and, besides this precaution, have likewise inspectors, to prevent their concealing the diamonds; which yet, notwithstanding all this care, they find opportunities of doing. Tavernier says, he saw one detected, who had put a stone into the corner of his eye; but swallowing a diamond is a surer and more usual method amongst them. If the miners meet with a stone of fifteen or sixteen carrats, they are allowed a reward, besides their usual pay, which is very little. The king has two per cent. for all the diamonds that

that are sold, and also a duty from the merchants, according to the number of hands employed in digging.

There are other mines at Gani, or Coulour, in the kingdom of Golconda, wherein they find diamonds from ten to forty carrats, and upwards, but they are not very clear, their water being usually tinged with the colour of the soil, which in some places is yellowish, in others black and moist, and in others reddish. Another defect of some consequence is a kind of greasiness appearing on the diamond when cut, which takes off part of its lustre. Here the miners dig to the depth of twelve or fourteen feet, where they find water, which prevents their going farther. The earth is carried from the mine, by women and children, into a neighbouring inclosure, where it is washed, and then dried and sifted. According to Tavernier, there are generally sixty thousand persons, men, women, and children, employed in these mines of Coulour. They work naked, like the miners at Raolconda, and are watched in the same manner by inspectors.

A great number of diamonds are found near Soumelpour, a large town, in the kingdom of Bengal, situated on the river Goual. From this river, all our fine diamond points, or sparks, called natural sparks, are brought, where they search for them after the great rains are over, that is, after the month of December. At that season, when the water is
grown

grown clear, eight or ten thousand persons, of all ages and sexes, come out of Soumelpour, and the neighbouring villages, and examine the sand of the river, going up it to the very mountain, from whence it springs. After this examination, they proceed to take up the sand, wherein they judge diamonds likely to be found, which is done in the following manner. Having made a dam round the place with earth, stones, fascines, &c. the river being then very low, they lade out the water, and dig about two feet deep, carrying the sand into a place walled round, on the bank of the river, where the process is much the same as at the mines above-mentioned, and the workmen are watched with equal strictness.

As to the diamonds of the island of Borneo, they are found in the sand of the river Succadan, or Succadano, and perhaps in some other parts of the island, with which we are little acquainted.

Diamonds are cut and polished by means of a mill, which turns a wheel of soft iron, sprinkled over with diamond-dust mixed with oil of olives; and the same dust well ground, and diluted with water and vinegar, is used in sawing of diamonds, which is done with a wire, as fine as a hair. But diamonds are more expeditiously divided by finding the grain of the stone, as it is called, that is, the disposition of the Laminæ, or plates, of which it is
com-

composed, and introducing between them the point of a fine chissel. When this is properly done, a stone will split as evenly as a piece of talc, and give two diamonds, or more, if the thickness will allow it, of the same breadth or surface of the original one. The splitting a diamond, sometimes answers another end, when the stone has a flaw, or blemish in it, which greatly debases its value; for by separating the plates at a proper depth, the flaw may be removed.

The making artificial diamonds has been attempted, but with no great success, the best of them falling vastly short of those that are genuine *.

The

* To distinguish diamonds from all other stones, whether counterfeit or natural, Dr. Wall seems to have found an infallible method. He observes, that a diamond being slightly rubbed in the dark, with any soft animal substance, as the finger, woollen, silk, or the like, appears luminous through its whole body. If the sun be eighteen degrees below the horizon, and any one holds up a piece of baize or flannel, stretched tight between both hands, at some distance from the eye, and another rubs a diamond swiftly, and pretty hard on the other side of the baize or flannel, the light is much more vivid, and pleasant to the eye of him that holds it, than any other way. But what the Dr. judges most surprising is, that a diamond, being exposed to the open air, in view of the sky, without rubbing, gives almost the same light of itself, as if rubbed in a dark room; and if in the open
air

The Carbuncle is a very beautiful gem, found only in the East Indies, so far as is yet known, and there but very rarely. Its colour is a deep red, resembling that of a ripe mulberry, and going off, where palest, into a strong scarlet, not into the purplish or violet tinge of the ruby and garnet; but when held up against the sun it loses its deep tinge, and becomes exactly of the colour of burning charcoal, from whence it seems to have obtained its name. It is generally found pure and faultless, and is naturally of an angular figure, smaller at one end than the other, which end tapers to a point like a pyramid, and is more finely coloured than the lower part of the column. It is of the same degree of hardness with the sapphire, which is second only to the diamond; and it bears the fire unaltered, not losing its colour, or becoming at all the paler for the trial. This has been experienced by some of our jewellers, who, disliking its too deep colour, have endeavoured to render it more vivid and striking to the eye, by divesting the gem of a part of it, but always without success. Many authors have confounded the Carbuncle with the ruby, and determined that every ruby which exceeds twenty-

air you hold your hand or any thing else over it, to hinder its communication with the sky, it gives no light at all. The Doctor tried all or most of the other precious stones, but could find no such phenomenon in any of them; so that this may be looked upon as a distinguishing criterion of a diamond.

four carats is properly a Carbuncle ; but the two gems are essentially different.

As to what has been reported of the Carbuncle's shining in the dark, and that the King of Pegu used no other light in the night-time but that of his Carbuncle, which cast a blaze like the sun, the story is absolutely false and ridiculous.

The true Ruby, in its most perfect state, is a gem of great beauty and value, and to be found only in the Indies, the principal mines of it being in the kingdom of Pegu, and in the island of Ceylon. Its colour is red, in very different degrees, but always with a greater or less admixture of purple. Its size is various, but the most common is that of a large pin's head, though it is sometimes met with of eight or ten carats, and even twenty or thirty ; nay we have accounts of some that weigh more than a hundred. It is never of an angular shape, but always of a pebble-like figure, and is commonly so naturally bright and pure on the surface as to need no polishing, but it is often debased by blemishes or foulness, which very much diminish its value. Our jewellers distinguish this gem into several species, calling them by different names, according to their different degrees of colour. Thus, besides the Ruby simply so called in its most perfect state, they have the Spinel Ruby, the Balass Ruby, the Rock Ruby, and the Rubacelle; but these two last are not in reality of the Ruby kind, the first being a beautiful species of garnet,

garnet, having an admixture of blue with its red, and the other of the hyacinth, having a faint tinge of yellow. It is said the inhabitants of Pegu have the art of heightening the redness and lustre of Rubies by laying them in the fire, and giving them the proper degree of heat.

The Hyacinth of the antients was a gem of a purple colour tending to a blue, being indeed a variety of the amethyst; but the modern Hyacinth is of a red colour, with an admixture of yellow; and though it be not so gaudy as the other red gems, the finest specimens of it are very beautiful. It is of various sizes, from that of a hempseed to that of a nutmeg; and its shape is not less uncertain, being sometimes found in an hexangular column terminated pyramidically, and at others in form of a roundish, or oblong, and generally somewhat flatted pebble. This gem is found in several parts of Europe, but the finest of them, like all other precious stones, are the product of the Indies. When it is of a pure and bright flame-colour, which is its most perfect state, the jewellers call it *Hyacintha la Bella*; and they distinguish two or three other kinds, to which they give different names, according to their different tinges of red or yellow.

The Garnet, the Sapphire, the Amethyst, and the Opal, though all of them found in the greatest perfection in the East Indies, have been already taken notice of in the course of

this work, and therefore need no farther description ; but there are two or three other gems produced in the countries we are now surveying, which are too beautiful to escape our observation. The Emeralds of India are evidently finer than those of any other part of the world, but being scarce, and at present found only in the kingdom of Cambaya, very few of them have of late been imported into Europe, most of those which our jewellers call Oriental Emeralds being brought from America. The Emerald in its purest state perhaps yields to none of the gems in beauty, being of a bright and naturally polished surface, and of a pure and charming green without the mixture of any other colour. It is found of various sizes, but usually small, though some are met with as big as a walnut. The accounts we have of an obelisk, a table, &c. of one entire emerald, are evidently erroneous, the stones having been jasper, or other stones of a green colour*. This gem, like the diamond, is of different figures, being sometimes of a roundish form, and sometimes of a columnar one ; but those of the former shape are always the hardest and brightest. The Emerald loses its colour in the

* A great deal of error and confusion about the Emerald had crept into the world in the time of Pliny, who has a long list of different kinds of this gem, among which are evidently jaspers, coloured crystals, and spars, which he mistakes for Emeralds. Even at this day, most of those we meet with under the name of Occidental Emeralds, are only tinged crystals brought from the mines of Germany.

fire,

fire, and becomes undistinguishable from the white sapphire, which name the jewellers give to all the harder gems when colourless.

The Beryll is another gem produced in some parts of Europe and America, but those of the East Indies are far superior to the others in the fineness of their colour and lustre. It is always of a tolerably bright and polished surface, and its colour is a mixture of blue and green, making exactly what we call a sea-green, from whence the moderns have given it the name of Aqua Marina. In its finest state it approaches to the hardness of the garnet, and is a very beautiful gem, but is at present of no great value. It is found of various shapes and sizes, but seldom very small, and generally in hexangular columns terminated by pyramids of the same form, which stand in clusters of twenty or more on the rugged prominencies of rocks in the cracks and fissures of the strata. We are told that the Beryll is sometimes found in pieces large enough to form fine vases, and that there are many such in Cambaya, Pegu, and Ceylon; but these accounts are certainly owing to some such mistake as we have observed has been made with respect to the Emerald.

The Topaz of the moderns, which is undoubtedly the Chrysolite of the antients, is a very beautiful and valuable gem in its purest and most perfect state; but such are rarely to be met with, and the less perfect ones are of little value. Those of the Indies are the finest

in the world, but they are generally small, being seldom found bigger than the head of a large pin, though now and then one arrives at a sixth of an inch in diameter. The form of the Topaz is always that of the pebble, roundish or oblong, usually flattened on one side; and its surface is uneven, but considerably bright, and of a good natural polish, unless it have contracted some accidental foulness. The finest Topazes are of a true golden colour, but they vary from this up to the colour of the deepest saffron, and down to that of the palest amber. They have a lustre at least equal to any gem, except the diamond, and being divested of their colour by fire, they resemble it very nearly; but the more common sort of Topazes are dead and heavy. This gem is easily counterfeited, and there are fictitious ones which by the eye can scarce be distinguished from those that are natural; our jewelers also frequently call those Topazes, which are only coloured crystals. Tavernier mentions a Topaz in the possession of the Great Mogul, weighing 157 carats, which cost 20,300l. sterling, and is the finest gem of this kind that ever was known.

There remains a very singular and beautiful gem to be described, viz. the Asteria or Cat's eye, which approaches something to the nature of the opal, in having a bright included colour, that seems to be lodged deep in the stone, and shifts about as it is moved in various directions; but in all other respects it differs
from

from the opal, particularly in its want of the variety of colours, and in its superior hardness. It has only two natural colours, a pale brown and a white, the brown being the ground, and the white playing about in it like a lucid speck ; but in some stones that have more of the white, instead of this speck or star, one whole side always appears whiter than the other. Besides these natural colours, this gem is liable, like most others, to some accidental tinges, some pieces of it being greenish, bluish, and yellowish ; but they are the worse for these variegations, never shewing the included light so clearly. It does not vary so much in shape and size as several of the other gems, being usually found between the size of a pea and the breadth of a sixpence, and of a semicircular form, convex at the top, and flat at the bottom. It is considerably hard, and is naturally of a smooth and polished surface ; so that it is seldom wrought, but worn with its native polish. The East Indies, and particularly the island of Borneo, afford very fine gems of this kind ; and they are also frequently found both in Europe and America.

Here we might add a description of the various kinds of Agate, Jasper, Onyx, and other semi-pellucid gems that are found in the East Indies ; but as most of these have been already spoken of, it would only lead us into needless repetitions.

S E C T.



S E C T. III.

An Account of the most curious Arts, Manufactures, &c. of the Indians.

THE fine silks, calicoes, muslins, and other manufactures of various kinds, imported from the East Indies, are a sufficient proof that the natives are a very ingenious people. It is said they will imitate a pattern, or copy a picture at first sight, so that it will be hard to distinguish the copy from the original. On the Coromandel coast they paint their chints and calicoes with a pencil, but those of the more northern parts of India are printed; the colours however are very lasting, and not to be fetched out by washing. For inlaying in ivory no people exceed them; nor can they be equalled for cabinets, scrutores, and other curious wood-works, very finely lacquered. They are also remarkable for making canes with beautiful cases of tortoise-shell, and abundance of other pretty toys.

The fineness of the Indian muslins is particularly remarkable; and if a piece be torn, the natives have a method of joining it so nicely, that the place where it was rent cannot be discerned. The Cambodians are very expert in making white or painted dimities, and they have

have excellent carpets, besides a sort for the common people, which they call Bancales, not unlike the plaids worn by the Highlanders of Scotland. They likewise weave and work with the needle rich hangings, coverings for the low chairs used by women of quality, and for their palanquins or litters, some of which are made of ivory and tortoise-shell, as are also their chess-boards, and other playing-tables. They make beads, little idols, bracelets, necklaces, and other toys, of a very transparent crystal, which is found in their mountains; and their manufacture of indigo is not inconsiderable.

The Indian goldsmiths, though their tools are mean, will imitate a piece of European work exactly enough, but their common smiths are but indifferent workmen. They neither make clocks, watches, nor gun-locks, nor any iron or steel work that requires springs; but they make swords, poniards, scymetars, and other weapons. The want of clocks they supply in great towns by a vessel of water, which runs out by a small hole in the bottom into another vessel; and when it is out, a watchman appointed for that purpose gives notice of the time of day by striking upon a bell or concave piece of metal. The inhabitants of Cambaya are famous for their manufacture of cups, spoons, hafts for knives, &c. which they make of agate that is found in some of their rivers. They also make fine quilts, and are the best embroiderers in the world.

In

In some parts of the Indies they have very good ship-carpenters, who build after the English model. They chiefly use a firm lasting timber, called Teak, and the planks being rabbeted, and let into one another, the seams are made very tight with oakum, and a kind of pitch called Dammer, brought from the Maldivé islands. The cocoa-tree furnishes them with cables and cordage*, and their anchors and guns they have from Europe. They have a kind of flat-bottomed vessels called Muffoulahs, whose sides are five or six feet high, and the planks very thin, being sewed together with ropes, so that they will yield like pasteboard, and are in no danger of splitting when they strike upon the shore. These boats are rowed by six or eight men, and carry large quantities of goods. They have also a vessel called a Catamaran, in which they carry anchors, guns, and other heavy articles. These consist of only three or four pieces of timber tied together, and are mostly used by fishermen, being not fit to carry goods that are damageable by wet, every little sea beating over them; and for the same reason passengers seldom go in them, though they are as safe as any other vessel; and some people have sailed in one of them along the coast for a hundred miles together.

* The ropes are made of a certain woolly substance growing on the inward surface of the cocoanut; and we are likewise told, that the leaves of the tree serve the Indians for sails.

What

What M. Thevenot relates of the dexterity of the Indians in taking water-fowl seems worth the reader's observation. The fowlers, he tells us, swim almost upright, so as to have only their head above water, which they cover with a pot full of holes, to let in air and give them sight. This pot is stuck all over with feathers, to deceive the wild ducks and other game, so that when the swimmer draws near them, they are not in the least frightened. The fowler then lays hold of them by the feet, drawing them down under water; and the rest of the ducks, thinking their companions have only dived, are not at all disturbed, but keep swimming about the place, till at length they are most of them taken in the same manner.

The same traveller gives an account of some extraordinary feats of agility performed by the Indians, who far exceed the tumblers and posture-masters of Europe. The truth of the facts is not to be questioned, as our author was an eye-witness of what he relates, though some things that he tells by hearsay are to be suspected; for as he was a man of great veracity, so he seems to have had too much credulity. In the province of Doltabad, near a village called Patoda, there was a great concourse of people to see these performances, and M. Thevenot was placed on an eminence under a tree, from whence he could easily see all that was acted. The finest tricks he thinks were shewn by a girl of thirteen or fourteen years of age, who diverted the company for the

the space of two hours and upwards ; and amongst her other performances this appeared to our author to be extremely difficult : she sat down upon the ground, holding in her mouth a long cutting sword, and with her right hand she took hold of her left foot, brought it up to her breast, then to her left side, and without letting go her hold, she put her head underneath her right arm, and at the same time brought her foot down along the small of her back, then quite under her, and this four or five times without resting, being always in danger of cutting her arm or leg with the edge of the sword. Then with her left hand and right foot she performed the same.

The girl having rested a little, a hole two feet deep was dug in the ground, and filled with water, into which they threw a little hook or clasp, which she was to fetch out without touching it with her hands. To this end she placed her feet on the sides of the hole, turning herself backwards till she rested upon her hands in the same place where her feet had stood. Then bending her arms, she let down her head into the water to search for the hook, which she missed the first time ; but making a second attempt, and resting only on her left hand, she raised herself up again with the hook at her nose.

After this a man set the girl upon his head, and ran full speed with her a considerable way, the girl not tottering in the least. Then setting
her

her do vn, he took a large round earthen pot or pitcher, and put it upon his head with the mouth upwards; and the girl having got on the top of the pitcher, he carried her about as before. This he did twice more, having once put the pitcher with the mouth downwards, and the other time with the mouth side-ways. The man then took a bason, and placed it bottom upwards upon his head, with the pitcher upon it, and the girl upon that, carrying her about with the same ease and security. In the next place he fixed in the bason a wooden truncheon, about a foot high, and as thick as one's arm, upon which he caused the girl to stand upright, and ran about with her as he had done before. Sometimes she stood upon one foot, holding the other in her hand, and sometimes sat down upon the top of the truncheon. Then the man put into the bason four wooden pins, about four inches high, placed in a square form, with a board upon each of them the breadth of two fingers, and upon these four other pins, with boards upon them, making as it were two stages or stories above the bason. Then the girl standing on the top of these little boards, the man carried her about with the same swiftness; and, though the wind was high, she did not appear in the least afraid of falling.



S E C T. IV.

*Particular Descriptions of the most remarkable
public Buildings in India.*

THroughout India, and the Mogul's dominions, the houses in general, even those of the chief towns, are either built of wood or clay, and thatched or covered with branches of palm-trees, or the like ; but the houses of the richer sort of people, who live in trading towns and cities, are built of brick, or stone, and covered with tiles, but not so well burnt, and durable as ours in Europe. However, though the generality of the Indian structures make a mean appearance, the palaces of their princes and great men, the Mahometan mosques, and the heathen pagods, or temples for their idols, are many of them stately and beautiful fabrics. It is true, their architecture seems odd to Europeans, being not like that of the antients, whom we copy after, but in a taste peculiar to the eastern nations, which is not without its beauties and conveniencies.

The palace of the Great Mogul at Agra, the capital of his empire, as taken notice of by Tavernier, Bernier, Thevenot, and other travellers, is a very sumptuous and magnificent structure. This palace, according to Manouchi,

chi, an Italian, who lived forty years at Agra, and was the Mogul's physician, is a citadel in form of a crescent, the walls whereof are mounted with cannon. It is situated on the river Semana, or Gemma, and is built of a spotted stone like marble, which, when the sun shines upon it, looks very beautiful at a distance. It is encompassed with ditches and a terrace-garden cut through with canals of running water, intermixed with green-plots and pleasure-houses, which form a delightful scene. Thevenot says, the palace consists of three courts, with porticos and galleries running round them, which are finely gilt and painted, and some parts of them covered with plates of gold. Under the galleries of the first court, there are lodgings for the Mogul's guards, in the second, for the chief officers; and the third consists of stately apartments for the emperor and his ladies, who, according to the custom of the eastern princes, are very numerous. Within the walls, there are likewise apartments for the inferior officers of the court, and long galleries for the emperor's manufactories of stuffs of gold, silver, silk, tapestry, &c. and for his goldsmiths, enamellers, and other artificers. Between the palace and the river is a large area, where the troops exercise, and the emperor sometimes pleases himself with seeing elephants fight, or such other diversions as he orders to be exhibited there, or on the water. Here are also about thirty palaces of princes, and great men belonging to the court, all built of brick or stone, and in the same line with

the Mogul's palace, besides many lesser palaces and other fine buildings, which all together afford a charming prospect on the other side of the river. In a word, we may form some judgment of the spaciousness and magnificence of this imperial palace, from the account of Father Tosi, who says it is four miles in compass, and deserves to be ranked amongst the wonders of the world.

Nor is the Mogul's palace the only ornament of Agra, for Thevenot informs us, that there is a vast number of mosques in that city, above eight hundred baths, and about three-score stately caravansera's, some of which consist of six large courts, with piazzas round them, and very commodious apartments for the merchants. The stately monuments, which several great men have erected for themselves in their life-time, or to the memory of their ancestors, contribute likewise to the beauty of Agra, particularly that which the Emperor Jehan Guir caused to be built for his father Ecbar, which surpasses all those of the Grand Signior's in magnificence. But that which the same emperor erected for one of his favourite wives, is still more surprising, inasmuch that Bernier thinks it deserves better to be reckoned among the wonders of the world, than the Egyptian pyramids, or any of the others that are so denominated. This Mausoleum was contrived and carried on by the best architects from all parts of the Indies, and was twenty years in compleating, though a
vast

vast number of hands were continually employed. It stands at a place called Secandra, which is reckoned one of the suburbs of Agra; and seems, by the description that travellers give of it, to be a prodigious pile of buildings, in the midst of a large and beautiful garden, into which, says Thevenot, all the parts of the Mausoleum are distributed. They particularly admire the great pavilions, the beautiful portico's, the lofty dome that covers the tomb, the just disposition of its pillars, the arches, that support a great many galleries one above another, the fine piazzas, alcoves, and terraces; all which shew that the Indians are not unskilled in architecture, and that though their orders, as we have already observed, are different from those of the antient Grecians, they are not without a pleasing symmetry and magnificence.

Here it may be expected we should take some notice of the Mogul's palace, at Dehli, or Delly, which is sometimes reckoned the capital of his empire, the court frequently residing in that city, where the air is cooler, and more wholesome than at Agra. This palace is likewise built in the manner of a citadel, being about two miles in circumference, surrounded by good walls, with round towers at proper distances, built partly of brick, and partly of stone. On all sides, except towards the river, which is the same that Agra stands on, it has a ditch faced with free-stone, and also very lovely gardens. Towards the

river, as at Agra, there is a square for military exercises, the fighting of wild-beasts, and such like diversions. Here are several apartments for artificers in the emperor's pay, for the guards and officers on duty, and for the great men who have the care of his household. Thevenot makes particular mention of a stately hall, adorned with thirty-two marble-pillars, where the emperor, having all his officers standing before him, with their hands across their breasts, gives audience every day at noon, to all who apply to him for justice. The same traveller mentions, but does not describe, the celebrated throne of the Great Mogul, which is said to be of massy gold, the four feet whereof are adorned with large diamonds, rubies, and other precious stones. The canopy over it is also covered with diamonds, and has round it a fringe of pearls, and above the canopy is a peacock, whose tail is full of blue sapphires, and other gems of different colours. The body is of enamelled gold, set with jewels, and on the breast there is a large ruby, from whence hangs a pearl like a pear, weighing about fifty carrats. The twelve pillars that support the canopy, are surrounded with many rows of fine pearls, and on each side of the throne are umbrella's, of crimson velvet, embroidered with gold, and fringed round with pearls, the sticks whereof are covered with jewels. To the throne are hung a scymetar, a battle-ax, a shield, a bow, and a quiver full of arrows, all enriched with precious stones, insomuch that some have valued
this

this throne, and all its appendages, at twenty millions sterling; but we are apt to think there is no great dependance to be had on calculations of this nature. That the riches and splendor of this eastern monarch's court are very great, is not to be questioned; and M. Bernier thinks it well worth a foreigner's curiosity to be in the grand square before the palace, when the great officers come thither to hold courts, or do other duty, to see them riding in from all quarters, finely dressed and mounted, either on stately elephants, or on horseback, with their footmen before and behind them, and many of them carried on the shoulders of six men, sitting in rich palanquins, with embroidered cushions at their backs, and chewing betel to sweeten their breath, while a servant carries their spitting-box of china or silver, and others fan them, and drive away the flies, with the trains of peacocks.

We might add much more of the magnificence and splendor of the Great Mogul, when he gives audience to ambassadors, when he goes a hunting, and on several other occasions; but this would be wandering from our subject.

The Mahometans of the Indies are at a great expence in their mosques, which are commonly of free-stone, and sometimes of marble; but the walls are perfectly plain, and the inside has no painting or images. They are

are built much in the same form, as those we have heretofore described in the Turkish dominions, being covered with a dome, and have small high towers or minarets, which the priests ascend at certain hours, to call people to prayers. There is scarce a Mahometan of any condition, but erects his Mausoleum in his life-time; for which end, they wall in a large piece of ground, with a reservoir of water, planting it with trees and flowers like a garden, and here erect a little mosque, or temple, raising their monument near it, which is generally arched, and covered with a handsome cupola. In some of them, lamps are kept continually burning, and priests read their law, for which certain revenues are appointed.

Some of the pagods, or temples of the heathen Indians, are magnificent structures, as we have already observed, being built of stone, with lofty spires and good carvings; but the inside is usually dismal, having no other light than what proceeds from the lamps that are burning before the idols. The figures of these idols are so various, and some of them so monstrous, that it is impossible to describe them; nor are the temples that contain them of any certain form, but some round, some oblong, &c. almost every kingdom and province in the Indies, having their peculiar deities, and placing them in different kinds of structures. The pagods of the Siamese are the most stately, and their Talapoins, or priests,

the

the most numerous of any in the Indies, who live in convents, inclosed with palisadoes of bamboo, their little cells looking like so many tents in an army. In the middle of the inclosure, stands the pagod or temple, with several pyramids round it, and a great number of idols; for the Siamese, like other idolaters of these countries, have not only one chief idol, but many inferior deities. The revenues of one of these pagods are said to be so large, as to subsist every day from fifteen to twenty thousand pilgrims.

Among these pagan temples, we are told of one at Golconda, which has a nich consisting of a single stone, of such a prodigious bulk, that they were five years in bringing it to the place, six hundred men being constantly employed about it all that time, and the machine that brought it, drawn by fourteen hundred oxen. But of all the Indian pagods, those of Elora, near Doltabad, in the kingdom of Decan, are the most celebrated, according to M. Thevenot, who made a journey thither, on purpose to see them, induced by the reports he had heard of them at Surat. Having ascended a rugged mountain, by a road cut out of the rock, with a wall on the side of it, to hinder the fall of carriages, our traveller tells us, he discovered a spacious plain, diversified with towns, villages, gardens, woods, and arable land, many lofty tombs covered with cupola's, and the most remarkable pagods in the Indies. The first thing he took
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particulat notice of, was several high chapels, where he entered a porch cut out of the rock, on each side whereof was a gigantic figure of a man, cut out of the rock likewise, and the walls were covered with various figures in relievo. Beyond this porch, he found a square court, every way a hundred paces; the walls whereof, which were the natural rock, were about thirty-six feet high, and as smooth and even, as if plaistered with a trowel. These walls are hollowed underneath, the void space making a gallery, supported by a row of pillars cut in the rock, which seems so undermined, and so slenderly propped, that one can hardly forbear shivering at first entering into it. In the middle of this court, there is a chapel, whose walls both without and within are adorned with bass-reliefs, representing Griffins and several sorts of animals. On each side of the chapel, there is a pyramid, or obelisk, larger at the basis than those of Rome, but not terminating in a point, and having some characters upon them, which Thevenot did not understand. Near the obelisk, on the left hand, is the figure of an elephant as large as the life, cut out of the rock, like the rest of the fabric, but his trunk is broken. At the farther end of the court, are two stair-cases, hewn in the rock; ascending which, we have the prospect of a plain, extending a league and a half, or two leagues in length, full of stately monuments, chapels and pagods, all owing their origin to the rock, which abounds in this part of the country.

Amongst

Amongst the rest of these heathen temples, there is a very large one built in the rock, having a flat roof, sustained by eight rows of pillars, about a fathom distant from each other. This temple is divided into three parts; the body of it taking up more than two thirds of the whole; the choir, which is narrower, makes the second part; and the third, which is the end of the temple, has the appearance of a little chapel. In the middle of this chapel, if we may call it so, stands a gigantic idol, with a head as big as a drum, and its other parts proportionable. The walls are also covered with monstrous figures in relievo, and on the outside of the temple there are several little chapels, adorned with sculptures, representing men and women embracing one another.

Our author went into several other temples of different structure, but all formed in the rock, and adorned with figures, pillars, and pilasters. One of them is divided into three stories, supported by so many rows of pillars, and each of them having a great door in the front, with stairs hewn out of the solid rock. There are also several arched temples, in one of which is a square well, full of excellent water. In short, all along this rock, for more than two leagues, there are a vast number of pagods, each dedicated to some heathen saint, whose statue is placed upon a pedestal, at the farther end of the pagod.



S E C T. V.

*Remarkable Laws and Customs of the Indians;
together with some general Accounts of their
Origin and History.*

THE Pagans of India marry their children while they are infants; and these are always married to one of their own tribe, and to one of the same trade. A carpenter never marries his child to that of a smith, nor a weaver to the child of a waterman. At what age soever the parents contract for their children, the married parties do not cohabit till the woman is twelve years of age, and the man some years older. Before the match is agreed on, the astrologer, or priest, is always consulted, whether it is likely to prove fortunate. An enquiry is also made what hour is likely to prove propitious for the solemnization and consummation of it. And when all things are settled, a grand procession is made through the streets for several nights successively, by the light of torches: the lady carried in one palanquin, on men's shoulders, and the bridegroom in another, with music playing before them. When the show is over, the bride and bridegroom are set down at her father's house, and here a table being placed between them, they join their hands cross it; and the priest, covering both their heads with a cloth, re-
pears

peats some prayers for their happiness, and gives them his benediction ; and having sprinkled the company with perfumed water, coloured with saffron, the ceremony is concluded, and an entertainment prepared for their friends and acquaintances.

When an Indian dies, the corpse is washed, and dressed in the best cloaths the deceased wore in his life-time ; and a funeral-pile being prepared at a small distance from the town, it is laid upon a bier, and being attended by the bramin, or priest, with the relations and friends, is carried to the pile, and burnt to ashes : abundance of sweet-wood being laid on the pile, if it be a person of figure, insomuch that the air is perfumed by it, which makes a funeral very expensive. If the deceased died within a small distance of the river Ganges, the corpse is heaved into that stream, as the readiest road to paradise ; this river being worshipped by the Indians, as a god. Vast numbers of people come from Tartary, and other distant parts, to wash in this river, for the expiation of their sins ; and during the time of washing in it, they incessantly cry out, " O Ganges, purify me ! " The Indians dip their sick in this river, in order to recover their health ; and if they die soon after, they are reckoned happy ; and the water of it is in such estimation, that it is transported in large quantities to every part of India. There are also some other rivers in India, which the inhabitants make the object of their adoration,

and into which they throw their deceased friends, as well as into the Ganges; from whence it appears, that the custom of burning the dead, is not universal in India.

The beloved wife burning herself with her husband, has formerly been very frequent; though this horrid custom appears now to be much disused. The Mogul, who is sovereign of the greatest part of India, does not suffer it in his dominions; and the Christians universally abhor the practice: however, the woman always had her option whether she would submit to it or not. She was, indeed, under some disgrace, if she refused, but looked upon as a heroine, if she had resolution to undergo the fiery trial.

But however this practice may have been of late years discountenanced in India, it is not absolutely discontinued in some places, as appears by the relation of a gentleman, who was an eye-witness of this barbarous sacrifice at Inglee, in Bengal, about the latter end of the year 1751. He relates, that the naked body of the husband was laid on a pile of wood, made up in a regular form; and his favourite wife, not above fifteen or sixteen years of age, walked to the pile, conducted by her friends; her father on one side of her, and her mother on the other. After a number of previous ceremonies were performed, she walked round the pile seven or eight times, in a melancholy and devout manner, conducted

ed as before by her father and mother. She then stepped upon the pile, and quietly laid herself down by the corpse of her husband, about whose neck her hands were fastened, and her legs tied to his; then both their bodies were anointed with a sort of unguent; over them was strewed a sort of yellow dust; and they were covered with a cloth, which was kept down by some pieces of wood. At last, the father of the deceased husband set fire to the pile, which run through it like lightning, by means of the yellow-powder: the fire was so fierce, that the spectators were obliged to draw a great way backward from the heat, and the whole was consumed to ashes in about an hour's time.

The mourning used in India is a tattered neglected dress: the women shave their heads on the death of a husband, but the men never shave their heads, or even cut their hair, but on the death of a father or sovereign. There is a colony of the antient Persians called Gaurs, who fled to India when the Mahometans conquered Persia, still residing at Surat, about a mile from which city they have a repository for their dead; and are of opinion, that they cannot do their deceased friends greater service, than by leaving them to be devoured by the beasts of prey: they erect stages or raised floors, in this repository, which is surrounded by a wall twelve feet high, and an hundred in circumference, where the bodies of their dead are exposed to the vultures and other birds of prey.

Few nations exceed the Tonquinese in the exact and regular administration of justice; for though they have no courts of judicature, any single magistrate may cause any offender to be brought before him; and may punish him according to the laws of the country, without any formal process; and sentence is immediately executed. As the Tonquinese shave the heads of none but criminals, if such escape, they are soon detected, and carried to the governor of the province. They punish murder by beheading with a backsword; and, even in cases where the criminal has hopes of pardon, the judge makes him hold a wisp of grass in his mouth, to denote that he is become a beast. Theft is punished by cutting off a member, or part of one, according to the nature of it; sometimes one joint of a finger, sometimes all of it; and, at other times, perhaps the whole hand. For other offences, the criminals are loaded with iron chains, and great wooden clogs; and sometimes have heavy boards, made like a pillory, hung about their necks for a month together: but the common punishment is whipping their naked bodies with a split bamboo. Debtors are often condemned to work for their creditors till their debts are paid, during which time they live on rice and water, and undergo such other discipline as the creditor pleases.

The Tonquinese girls take care to keep their teeth very white, till they are about twelve years of age, when they dye them as black as jet,

jet, with the juice of a certain herb, which they hold in their mouths three days successively : but it is of so poisonous a quality, that they must swallow no part of the juice ; and the women not only affect black teeth, but long nails. The husband may divorce the wife at pleasure, but the wife cannot divorce the husband, except on very extraordinary occasions. They eat with two little sticks gilt and varnished, which serve instead of forks ; and, when the husband divorces the wife, he takes on eof his own sticks, and one of the wife's, and breaks them, after which they each take one half, and sew it up in a piece of silk. If a woman is convicted of adultery, she is cast to an elephant bred up for the purpose, who gives her a toss with his trunk, and tramples her to death, the moment she falls to the ground.

Tavernier says, that the Pagans in the Mogul's dominions, when a child does not suck, carry it out in a linen cloth, and tie it to the bough of a tree, where they leave it from morning till night, when they fetch it back ; and, if it refuse the breast again, they tie it up three days after ; and, if it still continues to refuse the breast, they believe it to be a devil, and drown it. During this experiment, the crows many times pick out one or both of the infant's eyes, which is the reason that many of the Pagan Indians have but one eye, and many none at all.

The Bramins, or Indian priests of the God Brama, persuade such as are ill to leave legacies to the church, for which they give a receipt, which they put into the dead person's hand; in which case they draw a bill for ten times the value, in the other world, on some eminent saint, who negotiates such bills in paradise. They persuade the vulgar, that their idols eat like men; and, in order that they may be plentifully provided with good cheer, they make them of a gigantic stature, and give them a monstrous belly; and if the people fail in their offerings to these idols, by which the Bramins maintain their families, they threaten them with the anger of the gods. The people believe there is something so divine in a cow, that happy is the man who can get himself sprinkled with the ashes of one burnt by a bramin; and they esteem the man blessed, who, in the agonies of death, can lay hold of a cow's tail: for they believe transmigration, and think the soul sometimes returns into the body of that beast, which they consider as an high honour: the souls of the wicked, they imagine, enter into the bodies of dogs, swine, and other unclean animals: hence they abstain from the flesh of all living creatures, and kill nothing that has life, for fear of dispossessing the soul of a friend or relation of its habitation.

There is a religious order among the Bramins, called Faquirs, who make vows of poverty and celibacy; and to obtain the favour of Bra-

na, suffer the most dreadful tortures. The austerities of some of these are incredible, to such as have not been eye-witnesses of them : some stand for years upon one foot, with their arms tied to the beam of a house, or branch of a tree. By these means, their arms settle in that posture, and ever after become useless ; some sit in the sun, with their faces looking upwards, till they are incapable of altering the position of their heads. The people in all these cases making a merit of feeding them.

When the Zamorin, or Emperor of Calicut, on the coast of Malabar, marries, he must not cohabit with his bride, till the chief priest has enjoyed her, for which service he receives 500 crowns ; and, if he pleases, he may insist upon her company three nights. This custom prevails, from a persuasion that the first fruits of her nuptials must be an holy oblation to the god she worships. The nobles, who take a maid to wife, also pay the inferior priests for the like service. The daughters of the nobility, in this kingdom, may marry seven or even twelve husbands, one after another ; and the first husband cohabits with her, till she takes a second ; after which the husbands cohabit with her in turn, according to their priority of marriage, eight or ten days, as they can fix the term among themselves ; and he who lives with her, during that time, provides for her support. When the man who cohabits with her goes into the house, he leaves his arms at the door, and none dare remove them, or enter

ter the house, on pain of death : but if there are no arms to guard the door, any acquaintance may freely visit her. All the time of cohabitation, she serves her husband as purveyor and cook : she also takes care to keep his cloaths and arms clean. When she proves with child she names the father, who takes care of its education, after she has suckled it : but from the impossibility of assigning the true heirs, the estates of the husbands descend to their sister's children ; and, if there are none, to the nearest relation of the grandmother. These ladies of quality must not, however, marry out of the same cast or tribe, under the pain of degradation, if they marry into a lower tribe.

By the constitution of Attingo, upon the Malabar coast, the country is to be always governed by a Queen, who must not marry ; but that heiresses of her blood may not be wanting, she may chuse whom and as many as she pleases, to admit to the honour of her bed. The handsomest young men about the court generally compose her seraglio. The sons are in the rank of nobility, and the daughters alone can pretend to the succession.

The small-pox is so extremely dreaded in the kingdom of Pegu, and in particular in the province of Kirian it is esteemed so infectious, that if any one is seized with it, all the people in the neighbourhood remove to the distance of two or three miles, and there build new houses of bamboo's and reeds, leaving with the sick person

person a jar of water, a basket of rice, and some earthen pots to boil it in ; and then bid him farewell for twenty days. If the patient has strength enough to get up, and boil his rice, he may recover ; if not, he must die without attendance : but if he survives the twenty days, they take him away, conduct him to their new-built town, and make him a burghers.

The ordeal trial is much practised in the kingdom of Pegu, for discovering secret murder, theft, or perjury. One way is, to make the accuser and the accused take some raw rice in their mouths, when he who is guilty of the crime alledged, or of false accusation, is supposed not to be able to swallow it easily. Another way is, driving a stake into a river, and making both the parties take hold of it, and keep their heads under water, when he who continues longest without breath is the person to be credited ; and whoever is convicted by this trial, either for the crime alledged, or for malicious slander, must lie on his back three days and nights, with his neck in the stocks, without meat or drink ; and is besides fined. They have likewise the custom of dipping the naked hand into boiling oil, or melted lead, to clear them when accused of atrocious crimes ; and if the accuser scalds himself, he must undergo the punishment due to the crime, which makes people very cautious, how they calumniate one another.

With

With respect to the history of India, little more than the name of the country appears to have been known to the antients. Semiramis, soon after the commencement of the Assyrian empire, is said to have carried her arms to India ; and Bacchus, it is conjectured, conquered part of this country : but Alexander's invasion of India, after the establishment of the Grecian empire, is not doubted. None of these heroes however retained any part of their conquests, if they made any, or resided there long enough to acquaint themselves with the state of the country, or even to describe the bounds or true situation of it ; and the Romans never attempted to reduce it under their dominion.

India was probably first peopled from Persia ; that kingdom being contiguous to it, and in the way of Mesopotamia, where, it seems to be agreed, the descendants of Noah first settled after the flood. But whoever were the first inhabitants, the Ethiopians next possessed the southern part of India, as is evident from their posterity still remaining there ; not a white man, or any other complexion but blacks, possessing any part of the country ; that they are of the same origin with the Ethiopians is evident, not only from their long hair, but from their regular features, very different from the Guinea blacks : and that the original inhabitants of this part of India were black is improbable, because none of the natives of the other parts of India are black, though they lie much nearer to the Equator.

The

The next people that possessed the shores of India were the Arabians: for almost all the coast was subject to Arabian or Mahometan princes, when the Portuguese arrived here in the year 1500; and these had probably dispossessed the Ethiopians, and driven them up into the midland country, where they still inhabit. The next people who appear to have invaded India, were the Mogul Tartars, under the conduct of Tamerlane, about the year 1400. Tamerlane fixed his third son, Miracha, in the north of India and Persia, under the stile and title of the Great Mogul, which stile his posterity, the Emperors of Indostan, enjoy at this day: but the southern part of Indostan or Hither India was not reduced till the time of the Emperor Aurengzeb, who began his reign in the year 1667, and died in 1708; and the present Great Mogul is his great grandson.

With regard to the Kings beyond the Ganges, we know little of their histories, nor are we acquainted, whether they have any written accounts of former times or no.

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O F
NATURE AND ART
D I S P L A Y E D,
I N A
TOUR through the WORLD.
C H A P. IV.
O F
CHINA, and JAPAN.

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C H A P. IV.

Of CHINA and JAPAN.

S E C T. I.

A general Account of China, and Japan.

THE kingdom of China, comprehending Chinese Tartary, is situated between 95 and 135 degrees of east longitude, and between 20 and 55 degrees of north latitude. Its greatest length from west to east is about 2000 miles; and its greatest breadth, from north to south 1600 miles. It is bounded by Russian Tartary on the north, by the Pacific Ocean, which divides it from North America, on the east; by the Chinese Sea on the south; and by the kingdom of Tonquin, and the Tartarian countries of Thibet and Russia, on the west.

The most general divisions of this vast empire are into seven grand parts. 1. North of a prodigious wall, 1500 miles in length, which separates China from Tartary, and is called the

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Chinese

Chinese Wall, are the province of Niuche, with its chief city of the same name ; the province of Corea, the chief city of which is Petcheo ; and the province of Laotonge, the chief city of which is Chinyam. 2. Within the Wall, and adjoining to it, are the province of Pekin, with its chief city of the same name ; the province of Xansi, the chief city of which is Tayen ; and the province of Xensi, the chief city of which is Sigam. 3. On the coast of the Chinese Sea are the province of Xantum, the chief city of which is Chinchis ; the province of Nanking, with its chief city of the same name ; and the province of Chiam, the chief city of which is Nimpo. 4. The midland provinces are those of Honan, with its chief city of the same name ; Huquam, the chief city of which is Toangfu ; and Kiamsi, the chief city of which is Nankan. 5. The southern provinces are those of Fokien, the chief city of which is Fochen Amoy ; Canton, with its chief city of the same name ; and Quamsi, the chief city of which is Quelin. 6. The western provinces are those of Suchuen, the chief city of which is Tchinteu ; and Quechau and Yunam, each retaining the name of its respective chief city. 7. The Chinese islands are Formosa, the chief city of which is Tambay ; Ainan, the chief city of which is Lincato ; Macao, with its chief city of the same name ; and the Bashee islands.

The Japan islands, situated in the Chinese Sea, between 130 and 144 degrees of east longitude, and between 30 and 40 degrees of north

north latitude, comprehend Japan proper, or Nippon, the chief city of which is Jeddo; Tonfa and Bongo, retaining each the name of its respective chief city, and Disnia, the chief city of which is Nangasaque.

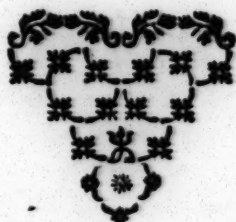
In China there are few mountains, the highest of which are in Chinese Tartary, and on the confines of China; but in Japan there are some very high mountains, particularly in Japan proper, or the island of Nippon, there is a mountain of such a prodigious height, as to be seen forty leagues off at sea, though distant eighteen leagues from the shore.

The chief rivers of China are 1. the Yamour, which divides Russian from Chinese Tartary. It rises in Russian Tartary; and, running from west to east, falls into the sea of Corea, opposite to the land of Jesso. 2. The river Argun, which, rising in a lake of Mogul Tartary, runs from south to north, and falls into the river Yamour, forming the western boundary between Chinese and Russian Tartary. 3. The Croceus, called also Hoambo, or the Yellow River, rises in Tartary, runs from west to east; and entering the Great Wall in the province of Xensi, bends to the south-east, and discharges itself in the Gulph of Nanking. 4. The river Kiam, or the Blue River, rises in the province of Yunam, and running north-east, falls also into the Gulph of Nanking. 5. The river Tay, rising in the province of Quecheu,

runs south-east to the river of Canton, and falls into the Chinese Sea at the island of Macao. Besides these, and many other rivers, there are a vast number of navigable canals in China; and some of them of such a prodigious extent, as to be a thousand miles in length; and deep enough to carry vessels of a very great burden: the principal canals are lined with stones on the sides; and when the boats do not sail, they are drawn by men. In China, there are such a number of families that live on the water all their lives, that some writers relate, that there are almost as many people upon the water, as upon the land, in this country.

The air of China, running through so many different climates, is very different in different provinces; the south part of this empire, which lies under the Tropic of Cancer, is excessive hot; and has its periodical rains, as other countries under the same parallels; the middle part of this empire enjoys a temperate climate and a serene sky, and the northern parts are cold, and subject to the like inclemencies of weather as other northern countries are. In this variety of climates, the Chinese have all the fruits and produce of the earth, that are to be found in hot or cold countries; and, having a fruitful soil, spare no pains in improving it. No country produces better raw silk, or in greater quantities, than China; and China and Japan ware are peculiar to these two countries.

In Japan, the winters are said to be excessive cold, occasioned by the vast quantities of snow which fall there, and the great rains and bleak winds, to which those islands, which lie high, are continually exposed; these islands are also frequently much troubled with violent storms and hurricanes, but particularly with thunder and lightning, which do a vast deal of damage frequently: the soil of the Japan islands is in general very fertile, and produces great plenty of the finest and whitest rice.





S E C T. II.

A particular Account of the most curious natural Productions of China and Japan, in the Animal, Vegetable, and Fossil Kingdoms; of remarkable Mountains or Volcano's; of medicinal and other singular Springs; of Rivers, Cataracts, and other natural Objects of Curiosity.

A N I M A L S.

BOTH China and Japan have most of the animals found in Europe, and in no less abundance. The Chinese horses are but of an ordinary size and strength, but they are supplied from Tartary with those that are more strong and serviceable. The horses of Japan are not large, but they are most of them handsome, and remarkable for their swiftness. They have also camels, mules, and other beasts of burden; and there are wild mules in China, which are fitter to eat than for any other use. These are of the same shape and size with ours in Europe, but of a lighter sorrel, and very fleet, so that few of them are killed but of the younger sort; and their flesh being sweet and tender is much admired, especially by the Tartars. They are traced by the earth they throw up,

up, to come at the roots on which they feed, are hunted with hounds, and supposed to propagate their species. Buffaloes are common in these countries, and they have a breed of sheep with very large tails, like those of Turkey. Their mountains and forests abound with wild beasts of various kinds, as bears, boars, wolves, leopards, tygers, &c. which last are said to be very fierce and dangerous, as they commonly go in search of their prey in large numbers. Elephants are chiefly bred in the province of Junnan, but are found in most other parts of the empire; and they are likewise bred up tame in the cities and towns of Japan. They have plenty of hares, deer, and other game, whose skins are a profitable commodity. Their hogs are black, and have deep bellies, reaching to the ground, like a breed that we see in England. They have great plenty of geese, ducks, and all manner of poultry; and their woods and mountains abound with eagles, cranes, pelicans, pheasants, and many other birds well known in Europe, besides several that are peculiar to those eastern countries. As to fish, their rivers, canals, and lakes are well stored with a vast variety; and in the fish-ponds of the curious there is said to be a particular kind, called the Gold and Silver-Fish, which merits a description.

This beautiful animal is usually about three or four inches long, and of a proportionable thickness. The male is of a most delicate red from the head to the middle of the body, and
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from thence to the extremity of the tail of a bright golden colour, far surpassing our finest gilding. The female is white, and its tail, and part of its body, looks as if it was perfectly washed over with silver. Their tails are not flat and even, like those of other fishes, but shaped something like a nosegay, thick and long, which contributes much to the beauty of the animal, besides the justness of its proportions. These fish are very tender, and sensible of the least injuries from the air; insomuch that great heat or cold, strong smells, the report of a cannon, a clap of thunder, or the like, very much affects them, and sometimes occasions their dying. Those who keep them in ponds or basons in their gardens, place a large earthen vessel with the mouth downwards at the bottom of the water, which is full of holes in the sides, that the fish may retire into it in hot weather to shelter themselves from the sun; and they likewise strew herbs on the surface of the water for the same purpose. A very little food suffices them, which is usually small worms bred in the water; but nothing pleases them better than a sort of pap made of wafers, which is adapted to their natural delicacy and tenderness. In the southern parts of the country they multiply exceedingly, if care be taken to preserve their eggs, which swim upon the water. These eggs are gently taken up and put into small vessels, which being exposed to the sun, they are hatched by the heat; and after the fish are grown to about an inch in length,





A Fishing Bird in China called Louan

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length, they may be safely removed into larger reservoirs.

The Chinese have not only their Golden Fish, but also a bird called Kinki or Golden Hen, so filed for its extraordinary beauty both of colour and shape, as well as its excellent taste, being said to exceed the finest pheasants. Its feathers are of an exquisite blue and red, beautifully shaded towards the extremities of the wings and tail, and variegated with several other colours.

The Louwa or Fishing-Bird of China is a very great curiosity, if the accounts we have of it are to be believed. The bird is as big as our heron, but shaped more like a raven, is webbed footed, and has a long crooked bill. The fishermen train up these fowls to catch fish, and bring them to be as tractable and as much under command, as hawks or spaniels are to the sportsmen in England. When they go to fish with them, either in the sea or the rivers, they have them perched on the sides of the boat, waiting for the word of command; which, when the fisherman gives, they take flight, and separately look for their prey; and when one of them has seized a fish, after which they frequently dive, he brings it to his master in the boat, and then flies away again upon the same errand. As fish is the natural food of these birds, they need no teaching to catch them; but the difficulty lies in re-
straining

straining them from devouring their prey, and to train them so as to bring it to their masters. To this end they tie a string about their necks, so slack as to suffer them to breathe, but so tight as to prevent their swallowing a fish, unless it be very small; and when they have taken fish enough to satisfy their master, he takes off the string, and lets them work for themselves.



V E G E T A B L E S.

OF all the vegetable productions of China and Japan, the Tea, or Tea-plant, is one of the most considerable, as its leaves afford such a favourite liquor by infusion, that it is imported in vast quantities into Europe, where it is daily used, particularly throughout Great Britain, Holland, France, and most other countries, by people of almost all ranks and conditions. This plant is a genus of the polyandria monogynia class of Linnæus; the corolla consists of six large, hollow, equal petals; the fruit is a capsule, formed of three globular bodies, growing together; it contains three cells, in each of which is a single globose seed, internally angulated. This shrub grows to five or six feet high, and is very ramose; its root is spreading and fibrous, and its leaves are about an inch and a half long, narrow, tapering to a point, and indented like our rose or sweet-briar leaves. The shrub is an ever-green, and is propagated by seeds, nine or ten of them being put into a hole together, and the shrubs thence arising are afterwards transplanted into proper ground. They thrive best when exposed to the south sun, and yield the best Tea; but there is a sort that grows without any cultivation, which, though less valuable, often serves the poorer sort of people.

The Chinese know nothing of Imperial Tea, and several other names, which in Europe serve to distinguish the goodness and price of this fashionable commodity. In truth, though there are various kinds of Tea, they are now generally allowed to be the product of the same plant, only differing in colour, fragrancy, &c. according to the difference of soil, the time of gathering it, and the method of preparation. The Vowi, Bohi, or Bohea Tea is so called, not from the mountains of Fokien, where the best of that sort is said to grow, but from its dark or blackish colour. This chiefly differs from the Green Tea, by its being gathered six or seven weeks sooner, that is, in March or April, according as the season proves, when the plant is in full bloom, and the leaves full of juice; whereas the other, by being left so much longer on the tree, loses a great part of its juice, and contracts a different colour, taste, and virtue, being more rough to the palate, and raking to the stomach. The Green Tea is most valued and used in China, and the Bohea seems not to have been known there so long as two centuries ago; for a judicious Hollander, who was physician and botanist to the Emperor of Japan, about a hundred and fifty years ago, tells us he had heard of the Bohi or Black Tea being come into vogue in China; but, upon the strictest search he could make, could find no such thing, and therefore believed it was a false report. This makes it probable, that originally they gathered all the Tea at the same time, but that since the discovery

covery of the smoothness and excellence of the more juicy Bohea, they have carried on their experiments still farther, by gathering it at different seasons; for Dr. Cunningham, physician to the English factory at Chusan, gives us an account in the Philosophical Transactions, that the Bohea, which he calls the first bud, is gathered at the beginning of March, the Bing or Imperial in April, and the Singlo or Green in May and June. It is farther to be observed, that what the Doctor styles the first bud, is indeed the finest of the Bohea kind, and that there are several degrees of coarseness in the leaves after they are full-blown and expanded; for during all the months of gathering, the leaves on the top of the shrub are the finest and dearest, and are gradually coarser the nearer to the bottom. As to the manner of curing the Tea, the Bohea is first dried in the shade, and afterwards exposed to the heat of the sun, or over a slow fire, in earthen pans, till it is convolved or shrivelled up, as we see it, into a small compass. The other sorts are commonly dried and crisped in the sun as soon as gathered; though according to Dr. Cunningham, the Bohea is dried in the shade, and the Green in pans over the fire.

It is very rare to find Tea perfectly pure, the Chinese generally mixing other leaves with it to increase the quantity; though one would think the price is too moderate to tempt them to such a cheat, it being usually sold amongst them for three-pence a pound sterling, and

never more than nine-pence ; so that it is most probable the worst adulterations of it are made by our own retailers. Bohea Tea, if good, is all of a dark colour, crisp and dry, and has a fine smell : Green Tea is also to be chosen by its crispness, fragrant smell, and light colour, with a bluish cast, for it is not good if any of the leaves appear dark or brownish. As to the properties of Tea, they are very much controverted by our physicians * ; but the Chinese reckon it an excellent diluter and purifier of the blood, a great strengthener of the brain and stomach, a promoter of digestion, perspiration, and other secretions, particularly a great diuretic, and cleanser of the reins and urethra. They drink large quantities of it in fevers, in some sorts of cholics, and other acute diseases; and think it corrects the acrimony of the humours, removes obstructions of the viscera, and restores decayed sight. That the gout and stone are unknown in China, is ascribed to the use

* Dr. Quincy speaks of Tea, particularly the Green, as one of the wholesomest vegetables that ever was introduced either into food or medicine : but Dr. James says, that whatever virtues are ascribed to Tea, or however useful as a medicine it may be in China, he is very certain, that either the Tea, or the water, or both, are extremely prejudicial as an habitual drink in England ; inso-much that he has known many hysterical cases relieved, and some cured, by leaving off Tea, without taking any remedy whatever ; and one in particular, which was attended with terrible convulsions.

of this plant; which is also said to cure indigestions, to carry off a debauch, and to give new strength for drinking *. Some of the virtues attributed to tea, are undoubtedly imaginary, and it has ill effects upon some constitutions; but experience shews, that several advantages attend the drinking of it with discretion. It quickens the senses, prevents drowsiness, corrects the heat of the liver, removes the head-ach, and being gently astringent, it strengthens the tone of the stomach.

As much as the Chinese esteem their tea, they seem to put a still greater value upon the plant called Ginseng, which is very scarce, being only found in the province of Leaotung, and the neighbouring mountains of Tartary. It is in so much request among their physicians, that they have wrote many large volumes of its virtues, and given it the name of the Spiritual Plant, the pure Spirit of the Earth, the immortalizing Plant, and such-like

* Sim. Pauli, physician to the king of Denmark, in an express treatise on the tea-plant, endeavours to shew, that these virtues ascribed to it in the eastern countries, are only local, and do not hold with the inhabitants of Europe: but herein, as Le Compté observes, he is contradicted by experience; and Pechlin, in a treatise on tea, has refuted his opinion. After all, it is worth observing, that the Dutch dry and prepare their sage like other teas, and sell it to the Chinese, who for every pound of sage, give three or four pounds of theirs, preferring it to the best of their own growth.

pompous titles. Martinius, Kircher, Tachard, Le Compte, and all the writers of the Chinese affairs, make mention of the Ginseng ; and yet we knew but very little of this plant before father Jartoux, a Jesuit missionary in China, who being employed by order of the emperor, in making a map of Tartary, in the year 1709, had an opportunity of seeing it growing, and has given us a draught of it, with an accurate description thereof, its virtues, and the manner of preserving and preparing it for use ; which being a curious piece of natural history, the reader will not be displeased if we are a little particular on the subject.

The Ginseng, as described by F. Jartoux, has a white root, somewhat knotty, about half as thick as one's little finger ; and as it frequently parts into two branches, not unlike the forked parts of a man, it is said from thence to have obtained the name of Ginseng, which implies a resemblance of the human form, though indeed it has no more of such a likeness, than is usually seen among other roots. From the root, arises a perfectly smooth and roundish stem, of a pretty deep red colour, except towards the surface of the ground, where it is somewhat whiter. At the top of the stem, is a sort of joint, or knot, formed by the shooting out of four branches, sometimes more, sometimes less, which spread as from a centre. The colour of the branches underneath is green, with a whitish mixture,
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and the upper part is of a deep red, like the stem, the two colours gradually decreasing, till they unite on the sides. Each branch has five leaves; and it is observable, that the branches divide equally from each other, both in respect of themselves, and of the horizon, and with the leaves make a circular figure, nearly parallel to the surface of the earth. All the leaves are finely jagged, or indented, of a dark green colour above, and of a shining whitish green underneath, and on the upper side, they are beset with small whitish hairs. From the centre of the branches, proceeds a second stem or stalk, very strait, smooth, and whitish, from the bottom to the top, where it bears a bunch of round berries, of a beautiful red colour, but not good to eat. The bunch that F. Jartoux saw, was composed of twenty-four berries, containing a white pulp, and two rough stones, of the size and figure of our lentils. The pedicles, on which the berries grow, arise from the same centre, and, spreading like the Radii of a sphere, make the cluster of a circular form. As to the flower, our missionary never saw it, but some assured him it is white, and very small.

This plant dies away every year, and its age may be known by the number of stems it has shot forth, of which there are always some marks remaining on the root.

Our author is of opinion, that the stone of the Ginseng lies a long time in the ground, before it takes root; and if the woods, in
which

which it grows, take fire, and are consumed, the plant does not appear till two or three years after. It is not to be met with in plains, vallies, marshes, or places too much open and exposed to the sun, but is found on the declivities of mountains, covered with thick forests, upon the banks of torrents, or about the roots of trees, and amidst a thousand other different sorts of vegetables.

The same father informs us, that the Chinese emperor having a mind the Tartars should reap all the advantages to be made of the Ginseng, gave orders in 1709, to ten thousand of those people, to go and gather all they could find, on condition, that each person should give him two ounces of the best, and that the rest should be paid for, weight for weight, in pure silver. It was computed, that by this means, the emperor would get that year, twenty thousand weight of it, which would not cost him one fourth part of its value. Father Jartoux met some of these Tartars in the desarts, and says, this army of simplers observed the following order : after they had divided a tract of land, among their several companies, they spread themselves out in a right line, to a certain fixed place, every ten of them keeping at some distance from the rest ; and in this order, going leisurely on, and looking carefully for the plant, they traverse the space of ground allotted for them. When the time is expired, the mandarins, or officers, who are appointed to inspect and command them, who are encamped in such places

as are proper for the subsistence of their horses, send to view the companies, to give them fresh orders, and to know if their number is compleat. If any one is missing, as it often happens, either by straggling from the main body, or being attacked by wild beasts, they make a careful search after him, and then return to their former business.

To secure this profitable harvest to the Tartars, it is said the whole province, where the Ginseng grows, is encompassed by wooden palisades, and guards are continually patrolling about, to hinder the Chinese from searching after it: but notwithstanding all this precaution, the desire of gain induces the Chinese to steal into the deserts where this plant grows, sometimes to the number of two or three thousand, at the hazard of losing their liberty, and all the fruit of their labour, if they are taken, either as they go into, or come out of the province.

Those who gather the Ginseng, have little regard to the leaves, but carefully preserve the root, burying together under ground all they can get of it in ten or fifteen days time. After this, they wash it well, and scour it with a brush; then dip it in scalding water, and prepare it in the fumes of a sort of yellow millet, which gives it part of its colour. The millet is boiled over a gentle fire, in a vessel with a little water, and the roots are laid over the vessel upon small transverse pieces of wood, where they receive the steam, being covered with

with a linen-cloth. They may also be preserved only by drying them in the sun, or by the fire; but then, though they retain their virtue well enough, they have not that yellow colour which the Chinese admire. The roots must be kept close, in a very dry place, otherwise they are in danger of corrupting, or being eaten by worms.

The Ginseng, as we have observed, is in the greatest request among the Chinese physicians, who make it an ingredient in almost all the medicines they prescribe for the richer sort of patients, it being too dear for the common people. They affirm, that it is a sovereign remedy for all weaknesses, occasioned by excessive fatigues, either of body or mind; that it attenuates pituitous humours, cures weaknesses of the lungs, and the pleurisy, corroborates the stomach, and helps the appetite; that it dispels fumes and vapours, fortifies the breast, and is a remedy for shortness of breath; that it strengthens the vital spirits, is good against dizziness in the head, and dimness of sight, and prolongs life to extreme old age. Those who are in health, often use it, to render themselves more strong and vigorous.

It is scarce to be imagined, that the Chinese and Tartars would set such a value upon this root, if they did not find it produce the most salutary effects. It is certain that it subtilizes, warms, and increases the motion of the blood, that it promotes digestion, invigorates, and removes weariness in a very remarkable manner.

ner. The Chinese seldom use more than a fifth part of an ounce of the dried root, when they give it to sick persons; but as for those who are in health, and only take it for prevention, or some slight indisposition, our author advises them not to make less than ten doses of an ounce, and not take it every day. In order to extract its virtues, the root is to be cut into thin slices, and put into an earthen pot well glazed, with about a pint of water. The pot must be well covered, and set to boil over a gentle fire; and when the water is consumed to the quantity of a cupful, it is to be sweetened with a little sugar, and drank off immediately. After this, as much more water is to be put into the pot, and boiled as before, that all the juice and spirituous parts of the root may be extracted. One of these doses is to be taken in the morning, the other in the evening.

China, as well as some parts of the Indies, produces great quantities of ginger, an aromatic root, well known amongst us, and of considerable use both as a spice and a medicine. The plant grows wild in many places near the sea, but that which is cultivated is much better. It resembles our rush, both in stem and flower; and the root does not run deep into the ground, but spreads itself near the surface, in form not unlike a man's hand, and very knotty. When arrived at maturity, they dig it up, and dry it on hurdles, either in the sun, or an oven; they also comfit the root, when green, with sugar, and honey, having first steeped it some time
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in water, to take away part of its acrimony, and dispose it to let go its outer skin. The Indians likewise eat it green, by way of sallet, first chipping it small, mixing it with other herbs, and seasoning it with oil and vinegar. They also make a marmalade of it, of which the northern people make great use, esteeming it excellent against the scurvy. The dried root is very hot and penetrating, discusses flatulencies, strengthens the stomach and bowels, excites an appetite, promotes digestion, and resists putrefaction.

To the roots already mentioned, we may add another, called Huchuu, which indeed, would be more remarkable than any of the rest, if all were true that the Chinese relate concerning it. Dr. Cunningham saw the root in the island of Chusan, to which, he says, the natives ascribe wonderful properties, as that of prolonging life, and turning grey hairs black, &c. by drinking an infusion of it for a considerable time.

The wood called Santal, or Sanders, is another production of China, as well as of the kingdom of Siam. There are three sorts of Sanders, white, yellow, and red, which are all produced by trees of the same kind, their different colours being supposed to arise from the difference of climates where they grow, or from the different parts of the tree from whence they are taken. According to many, the cortical part is the white Sanders, and the medullary

dullary part, the yellow Sanders; but Garcias says, they are had from two different trees, though so much alike, that they cannot be distinguished, except by the natives. This, however, we are better assured of, that the tree producing yellow Sanders, grows as high as our walnut-trees, bearing leaves resembling those of the lentisk, bluish flowers, and fruit like a cherry, green at first, but blackening as it ripens, and of a faintish taste. The white Sanders, is the paler marrow of the same tree, which has not such a fragrant smell, nor aromatic taste, as the yellow Sanders, and is therefore less esteemed. The red is the heart of another species of this tree, very solid and ponderous, but less odoriferous than either of the former. They are all reckoned refrigerating, drying, and cordial; and the red is pretty astringent.

But of all the curiosities of the vegetable kind to be found in China, none seems more surprising than the Tallow-tree, which produces a substance like our tallow, and serving for the same purpose. It is about the height of our cherry-trees, its bark very smooth, its trunk short, the head round and thick, the branches crooked, and the leaves shaped like a heart, of a shining red colour. The fruit is inclosed in a kind of pod, or cover, like a chesnut, which opens when it is ripe, and discovers three white kernels, of the size and form of a small nut, each having its peculiar capsula, and a little stone in the middle.

When the fruit thus exposes its white kernels, amongst the red leaves, the mixture of colours makes the tree appear exceeding beautiful: but the wonder is, that these kernels have all the qualities of tallow, its smell, colour, and consistence; and accordingly the Chinese make candles of them, which would doubtless be as good as ours in Europe, if they knew how to purify their vegetable tallow, as well as we do our animal. They prepare it for use by melting it down, and mixing a little oil with it, to render it softer and more pliant; but for want of better management, these candles yield a thicker smoke, and a dimmer light than ours. These defects are owing, in some measure, to the wicks, which are not of cotton, but only a little rod, or switch, of dry light wood, covered with the pith of a rush wound round it, which being porous, serves to filtrate the tallow, attracted by the burning stick, and thus keeps the flame alive.

But besides the fruits they have in common with us, there are others in China, which are not known in Europe. The most delicious of these, is called Letchi, which is shaped like a muscle-plumb, and about the same bigness. It has a rough thin rind, inclosing a pulp, of an exquisite taste, to which nothing we have in Europe is comparable; but it is not proper to eat much of it, being of so hot a nature, as to cause the skin to break out in pimples. The Chinese dry it, whereby it becomes black, and wrinkled like our prunes, and so is preserved.

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and eaten all the year. It is also used in tea, to which it gives an agreeable acid.

They have another small fruit, called Lenyen or Dragon's-Eye, which grows on a large tree like our walnut, and has a smooth rind, of a greyish colour, but growing yellowish, as it ripens. This fruit has a pleasant acid taste, is very full of juice, and is reckoned an extraordinary cooler.

The Sezee, another fruit peculiar to China, grows almost in all parts of it; and of this, as of apples, there are several kinds. Those in the southern provinces, taste much like sugar, and melt in one's mouth; but in the northern provinces, they are larger and firmer, and more easily preserved. The rind of the former is clear, smooth, transparent, and of a shining red colour, especially when the fruit is ripe. Some are shaped like an egg, but usually bigger; the seeds are black and flat, and the pulp is very watery, and almost liquid, so that they suck it all out at one end, leaving nothing but the skin. When they are dried like our figs, they become mealy; and in time, there grows a sugared crust upon them, of a delicious flavour. The Chinese do not much regard the cultivation of this fruit, the tree growing naturally in almost any soil; but would they endeavour to bring it to perfection, by grafting, it might probably be much improved.

F O S S I L S.

THE mountains of China abound with variety of metals and minerals, and amongst the rest, they have gold and silver, but their gold mines are not suffered to be opened, and yet they have plenty of that commodity, by reason of the great quantities of it washed down by torrents, from the mountains, in the rainy seasons, and caught by fleeces, and other strainers laid across the water, or found among the sand and mud of their rivers. Multitudes of people live wholly by this business of gathering gold, which is said to be so pure as to need no refining. It is probable, they prohibit the working of their gold mines, that they may have a reserve of that metal, in case of need, having at present more than enough for their own use, and a constant supply of it brought into their country, from Europe and other parts. They have also mines of copper, iron, quicksilver, and some lead ; but this last metal is very scarce, as appears by our English lead finding so quick a market in China. Besides these metals, they have several compound ones, the manner of mixing which, they keep as a great secret ; particularly that called Tonbaga, or Donbaga, which is of the colour of very pale brass, or dull kind of tin, and to which they ascribe several extraordinary virtues, as those of expelling poison, stopping hæmorrhages, and the like, merely by wear-

wearing it in the form of a ring, or necklace.

The mountains of Japan are likewise enriched with mines of gold and silver, which they yield not only in large quantities, but of an extraordinary fineness. The copper of Japan is excellent, but it is said they spoil their brass, by too much refining. They have also tin, lead, and iron, and quarries of several sorts of marble; nor are they without stones of a more precious nature, but of such we have spoken sufficiently in the preceding chapters.

In several parts of the province of Honan, in China, there is found a sort of salt-earth, which being boiled and crystallized, makes a very good white salt; and in some places, the ground, after rain, spews up a kind of froth, which is made into an excellent soap. The province of Quamsi is famed for a yellow earth, which taken inwardly, expels poison, and by outward application cures the bite of venomous creatures. There is also a sort of earth, of a fine red, like vermilion; and another of a fine white, which are used as cosmetics, by the ladies. The same province furnishes, in great abundance, that valuable earth, or clay, of which they make their Porcelaine, or China ware, so much esteemed and used amongst us, being the most beautiful earthen manufacture of any in the world, though it has of late been well imitated in Europe. This earth is of two kinds; the one called

Kaulin, which is full of glittering corpuscles; the other called Petunse, which is of a plain white, exceeding fine and soft to the touch. Both these earths, or rather stones, are found in quarries, twenty or thirty leagues from King-teching, to which place they are brought down the river, by a vast number of little barks, continually employed in that service. The Petunse is cut out of the mine, in form of bricks, and is much harder than the Kaulin; which last, notwithstanding, is what gives the strength and firmness to the porcelain. The mines of the Kaulin are deep, wherein it lies in glebes or clods; and the mountains whence it is dug, are covered with a reddish earth. As to the manner of preparing these earths, and the whole process used in making of porcelaine, we shall describe it when we come to speak of the manufactures of China and Japan, both countries being famous for this commodity.



VOLCANO's, CATARACTS, SPRINGS, &c.

IN China, there are several volcano's, or burning mountains, the most remarkable whereof is that called Linosung, which is of a great height, and vomits fire, cinders, ashes, and sometimes torrents of sulphur, and other minerals. In the great island of Nippon in Japan, there are no less than eight volcano's, which at some particular times burn with incredible fury, and cause great disorders and devastations round them, not unlike those of *Ætna* and *Vesuvius*.

Some of the rivers of China are very large, and remarkable for their cataracts, particularly that near the city of Hoaymingham, where the river falls down three precipices, one after another, with such a roaring noise and violence, as is more easy to conceive than to describe. Nor are these cataracts the only curiosity that authors take notice of in their accounts of the rivers of China. *Le Compté* tells us of one that is always red like blood, and of another in the province of Suchen, which glitters by night, occasioned by the great number of precious stones in it, from whence it is stiled the Pearl-River. A third is said to turn blue in harvest, and we are told of another in the province of Fokien, whose water is green, and changes iron into copper. But the most surprising river of all, is that which annually rises
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on a certain day of the month, with such a high tide before the city of Hangcheu, that multitudes of people flock thither from all parts to behold it. If we believe the Chinese, who are themselves extremely credulous, their country abounds with curiosities of this kind; but these accounts must be either absolutely false, or misrepresented, though many such phænomena, which have been thought miraculous, have been found, upon examination, to be owing to natural causes.

Several springs in China are said to ebb and flow regularly with the sea, and others are so hot, that people frequently boil meat over the steam. There are cold and hot springs at a little distance from each other, particularly two near the city of Jungchan, which issue from a stone, cut in the form of a man's nose, one of the nostrils yielding hot water, and the other cold: but the Chinese tell us of one still more wonderful, from whence issues both hot and cold water, which afterwards separate from each other; and the like is reported of another spring, one half of which is clear, and the other muddy, and the waters immediately separate if they are mixed together. We likewise read of several lakes of a petrifying quality, turning every thing to stone that is thrown into them, even fishes themselves; and they tell us of a great mountain full of caverns, whose very aspect is terrible; in which there is a lake of such a nature, that if a heavy stone be thrown into it, one presently
hears

hears a noise like a clap of thunder, and some time after arises a thick mist, which soon dissolves again into water.

The mountains of Japan, as well as those of China, afford great variety of medicinal waters, and those of different degrees of heat, and variously impregnated with sulphur, copper, alum, and other minerals. But the most remarkable of these springs, is that mentioned by Varenus, which is said to be as hot as boiling oil, and to scorch and consume every thing thrown into it, as cloth, wool, wood, &c. This surprising spring breaks forth only twice a day, for the space of an hour, during which time, the ebullition is so fierce and strong, that nothing can withstand it, the water bursting out with such vehemence, as to lift up large stones laid over the mouth of the spring, and that with a great noise, sometimes resembling the explosion of a cannon.



S E C T. III.

*An Account of the most curious Arts, Manufactures,
 &c. of the Chinese and Japanese.*

THE principal manufacture of China is that of silk, which employs a vast number of people: the best and finest silk is produced in the province of Chekiang; and, in such vast quantities, that this single province is able to supply all China, and the greatest part of Europe. It is chiefly manufactured, however, in the province of Nanking, where the best workmen reside, though the silks of Canton are valued by foreigners above all others. The sort of silk most common among the Chinese is that called Touanze, which is like our satin, and is plain or wrought with flowers, birds, trees, and houses. These figures are not raised upon the ground by a mixture of raw silk, as is practised in Europe, which makes our work not so durable; but the silk is twisted, and the flowers are distinguished only by the different shades and colours. When they mix gold or silver with it, it resembles our brocades or flowered silks, but their gold and silver thread is wrought in a manner peculiar to themselves, the silk being spun and covered with little scrolls
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of paper gilt or silvered over, and not with flatted wire, as is the practice of our European artists. In summer they wear a kind of silk not so close as our taffety, nor with so good a gloss, but more substantial; it is sometimes plain, and sometimes powdered with large flowers, pierced through and cut like English lace. Besides this they have another sort of taffety, which is a very close silk, and yet so very pliant, that it does not wrinkle by pressing or tumbling, and bears washing like linen, without losing much of its beauty. They make various kinds of silks, besides their gold tissues; and also velvet, plush, crapes, druggets, serges, and tammies: but though wool is very plentiful, especially in the provinces of Xenii and Xansi, which abound with sheep, yet they make very little cloth; so that our English cloth is much esteemed amongst them, and sells dearer than their richest silks. They make blankets of their own wool, and a sort of russet cloth, of which their students have gowns for the winter.

The Chinese likewise manufacture a great deal of cotton, and make a kind of linen of a plant called Co, found only in the province of Fokien. It is a sort of creeping shrub, probably a species of cotton, whose leaves are round, smooth, and green within, but whitish and downy on the outside. Some of the stems grow as thick as one's finger, which are pliable, and downy like the leaves. When it is gathered, the bundles of it are put into water,

as

as we do hemp; and the outer skin being peeled off and thrown away, they divide the inner, which is much more fine and delicate, into very slender filaments, which are manufactured into a sort of linen, remarkable for its lightness and coolness; and accordingly people of fashion wear vests of it in summer.

Japan, as well as China, abounds with the finest silk, of which the greatest part is manufactured by the natives. The Japanese temper their steel to such perfection, that they are remarkable for making the best of scymetars, and steel blades of all sorts, far exceeding those that are wrought in China. They are particularly famous for their beautiful cabinets, and for their fine varnish and lacquer, which is so valuable, that a quantity of the best sort made in Japan will sell for twenty times as much as an equal quantity of that which is made in Europe. The varnish, according to the account given us in the Philosophical Transactions, is made of turpentine mixed with a curious sort of oil, and boiled to a proper consistence. The lacquer or lac is the juice of a certain tree drawn from it by incision, and caught in pots fastened to the tree for that purpose. At its first coming out it is of the colour and consistence of cream, but, being exposed to the air, the upper part of it soon turns black; and to make it all black, and fit for use, they put a quantity of it into a bowl, and stir it about with a piece of smooth iron for twenty or thirty hours, whereby it becomes black

black and thickens. With this they mix a quantity of very fine ashes of burnt boughs, and having stirred it well together, they lay it smooth with a brush on the wood they intend to lacquer. Then letting it dry in the sun, it becomes harder than the wood itself; after which it is rubbed with a smooth stone and water till it be as smooth as glass, and then they lay on the varnish. If they would have red or any other colour instead of black, they mix the colour in fine powder with the varnish; and the smoother it is laid on, the more beautiful it appears. When they paint or japan, as we call it, in gold or silver, &c. they draw with a fine pencil, dipped in the varnish, the flowers, birds, or other figures; and when it begins to dry they lay on the leaf-gold or silver, and sometimes pin-dust, which being rubbed when thoroughly dry, the figures remain as drawn with the varnish, and the rest is a bright black ground. This lacquer is very pernicious to the hands and face, and sometimes causes swellings or lameness, having an effect upon the jappanners, in some respects like that which the composition of white lead and other ingredients has upon our painters.

We have heretofore described the European method of making paper of linen-rags, and taken notice of the various opinions of authors concerning the origin of that invention *; but the materials of the Chinese paper, and the way of preparing them being different from

* See Vol. VIII. p. 85. & seq.

ours in Europe, it is necessary to give an account of this amongst other curious manufactures of that country. The Chinese paper, it must be observed, is of divers kinds ; some made of the rinds or barks of trees abounding in sap, as the mulberry-tree and elm, but chiefly of the bamboo and cotton-tree. In reality, almost every province has its several paper ; that of Sechwen is made of hemp, that of Chekiang of wheat or rice straw, that of Kyangnan of the skin found in the balls of silk-worms, that of Fokien of soft bamboo, and the bark of the mulberry-tree furnishes the paper used in the northern provinces *.

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* Not only the bark, but the leaves of several trees and plants have been used as paper, and still continue to be so in some parts of the world. In Ceylon, for instance, they write on the leaves of the Talipot ; and the Bramin manuscripts sent to Oxford from Fort St. George are written on leaves of the Ampana or Palma Malabarica. We are also told by Hermannus of a large Malabar palm-tree, with plicated leaves almost round, and twenty feet broad, which the natives use to cover their houses, and likewise to write upon, making the characters thro' the outer cuticle. In the Maldivé islands they write on the leaves of a tree which are above two yards long, and a foot broad ; and in several parts of the East-Indies the leaves of the Musa Arbor, or plantain-tree dried in the sun, served for the same purpose, till they became acquainted with the use of European paper. In fine, Mr. Ray mentions divers kinds of Indian and American trees that afford paper, particularly one called Xagua,

As to papers made of the bark of trees, the manner of their preparation may be exemplified by that of the bamboo, a tree of the cane or reed kind, but much larger, smoother, harder, and stronger than any other species. The second coat or skin of the bark, which is white and soft, is what is commonly used for paper. This they beat in fair water to a pulp, which they take up in very large moulds or frames, so that they have sheets ten or twelve feet long, and sometimes more. They are compleated by dipping them sheet per sheet in alum-water, which serves instead of the size we make use

Xagua, whose leaves are so large and of so close a Texture, that they will cover a man from head to foot, and shelter him from rain like a cloak. From the innermost substance of these leaves a paper is taken, being a fine white membrane, as large as a skin of our parchment or vellum, and not inferior in beauty and goodness to the best of our papers.

As to the bark or inner rind of trees, on which the antients wrote, several such manuscripts are said to be still extant, particularly one in the Abby of St. Germain's, which in many places is not legible, the upper surface of the bark, on which the letters were drawn, being peeled off, though the under part remains entire. But after all that Mabillon and Montfaucon have said concerning the bark manuscripts of the antients, the learned Count Maffei attacks the whole system as erroneous, and maintains that the distinction between the paper made of the Papyrus in Egypt, and of the Liber or bark of trees, in other countries, is without foundation.

of, and not only hinders the paper from imbibing the ink, but gives it a lustre that makes it look as if it were silvered, or at least varnished over. This sort of paper is white, soft, close, and without the least roughness; though, being made of the bark of a tree, it cracks sooner than European paper. Add to this, that it is more apt to take moisture, that dust sticks to it, and that it is more liable to worms; to prevent which last inconveniency, the Chinese often beat their books, and expose them to the sun. Its thinness likewise makes it not so durable, so that they are under a frequent necessity of renewing their books by fresh impressions.

The paper of the bamboo, however, is not the best that is made in China, that of the cotton shrub being the whitest and finest, and least subject to the inconveniencies above-mentioned. But the paper most commonly used in China is made of the tree called Chuku or Kuchu, which Du Halde compares first to a mulberry-tree, then to a fig-tree, then to a sycamore, &c. so that from his description we know as little of it as if he had said nothing about it. The greenish outside of this tree being first scraped away, the inner rind is taken off in long thin slips, which are blanched in water exposed to the sun, and then prepared and made into paper in the same manner as the bamboo.

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Here it is to be observed, that the bamboo and the cotton-shrub have this peculiarity, that not only their inner bark, but their whole substance may be employed, being prepared in the following manner. Out of a wood of the largest bamboo's they select shoots of a year's growth, which are as thick as the calf of a man's leg; and these, being stripped of their outside rind, are split into strait pieces six or seven feet long, and steeped in a pond of muddy water, till they grow soft and rot by the maceration. They are then taken out, washed in clean water, spread in a large dry ditch, and there covered with lime for a few days. After this they are washed a second time, then separated into filaments, which are exposed to the sun to dry and whiten, then thrown into large coppers, where they are thoroughly boiled, and afterwards reduced to a thin paste or pulp by the strokes of weighty hammers. With this pulp they mix an unctuous sort of juice, extracted from the shoots of a plant called Koteng, care being taken not to put too much or too little, on which the goodness of the paper very much depends. Having beaten this mixture well together, till it resembles a thick clammy water, they pour it into a large reservoir, with low walls round it, and so cemented on the sides and at bottom, as not to be penetrated by the liquor. This being done, the workmen standing at the sides of the reservoir dip in their moulds, and take up the surface of the liquor, which instantly becomes paper, the mucilaginous juice of the Koteng binding the

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parts,

parts, and rendering it compact, soft, and glossy. To make sheets of an extraordinary size, they have large moulds sustained by strings, and lowered and raised by pullies, some of the workmen being employed to let down and pull up the frame, and others to take off the sheets, each doing his office with great regularity and expedition.

In order to harden the sheets, and make them bear ink, they undergo the following operation called *Faning*, from the Chinese word *Fan*, which signifies alum. Six ounces of fish-glue being cut small and steeped in water, it is afterwards boiled and stirred all the time to prevent lumps; and the whole being reduced to a thin liquid substance, they melt and incorporate with it three quarters of a pound of calcined alum. Then this mixture is put into a wide basin, and each sheet being drawn nimbly through it by means of a stick they use for that purpose, the paper is hung up to dry; for which end they have a hollow wall, whose sides are well whitened, through which it receives the heat of a neighbouring furnace; and, by the help of this sort of stove, the sheets are dried in a very little time.

This account of the Chinese paper leads us to describe their ink, which is an admirable composition, in vain attempted to be imitated in Europe. The Chinese or Indian Ink, as we commonly call it, is not fluid as ours is, but solid, like our mineral colours, tho' much lighter. It is made of lamp-black of several kinds, but the

the best is that obtained by burning hog's grease; and with the black they mix a sort of oil to make it the smoother, adding some odorous ingredients to take away the rankness of the smell. When it is mixed into a paste of a proper consistence, they form it in moulds into little oblong sticks or cakes, about a quarter of an inch thick, and adorned with the figures of dragons, birds, flowers, &c. which are so curiously cut in the wooden moulds, that we scarce engrave any thing finer upon metals. To use this ink they have a piece of polished marble, made hollow, so as to contain a little water, in which the stick of ink is rubbed till the water becomes of a sufficient blackness. Thus they presently have a fine shining ink, exceeding black, and of such a nature that it never runs or spreads farther than the pencil, so that the letters are always smooth and evenly terminated. It is of great use in designing, because the colour may be weakened or heightened at pleasure; and there are many things which cannot be represented to the life without it.

The Chinese have a pretty method of silvering paper, if we may call it so, at a small expence, and without using any silver. In order to this they take two scruples of a size or glue made of leather, one of alum, and half a pint of clean water. These they simmer over a gentle fire till the water is consumed, that is, till no more steam arises; and with a pencil they spread two or three layers of this glue over the sheets of paper laid smooth upon a table.

table. Then through a fine sieve they sift over the paper a powder made of talc and alum, which having been boiled in water, is dried in the sun and pounded; and this being spread uniformly on the sheets, they hang them in the shade to dry; after which they are laid again on the table, and rubbed gently with clean cotton, to take off the superfluous powder, which serves a second time for the same purpose.

There remains still to be described that noble manufacture of Porcelane or China Ware, which was a long time a mystery in Europe*, in spite of all the endeavours of the Jesuit

* We were formerly so little acquainted with the composition of Porcelane, that some of the most learned men in Europe, namely Scaliger and Cardan, were so egregiously mistaken, as to think it was made of eggs and sea-shells beaten together, and buried under ground for eighty or a hundred years; but the account we are going to give, will put that matter out of all question. As to the inventor of Porcelane, the Chinese annals are entirely silent on that head; nor do we know much more of the time of its invention, only that it appears from the said annals to have been before the beginning of the fifth century. But this sort of ware is of greater antiquity according to Cardan and Scaliger, who both agree that the *Vasa murrina* of the Romans, which were first seen at Rome in Pompey's triumph, and afterwards became so highly valued, were the same with the Porcelane of our times.

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A Pine Apple

W. Smith del.



missionaries to penetrate into the secret. The veil however was at length removed by Father d'Entrecolles, who in a letter from China to Father Orry, in the year 1712, which was published in French, describes the whole process in all its circumstances ; an extract whereof cannot fail of being agreeable to the curious reader. It has been already observed, that two kinds of earth are used in the composition of Porcelane, the one called Kaulin, full of glittering particles, and the other Petunse, which is of a plain white, dug out of the mines in the shape of bricks, and much harder than the former. This last sort of earth is first broken and pounded into a coarse powder with iron hammers, wrought either by the hand or by mills ; and when by repeating the operation, the powder is rendered almost impalpable, they throw it into a large urn full of water, stirring it briskly about with an iron instrument. Then letting the water rest a while, they skim from the top a white substance formed there, of the thickness of four or five fingers, putting this scum or cream into another vessel of water. They then stir the water of the first vessel a second time, and when it has settled they skim it again ; and so alternately, till nothing remains at the bottom but the gravel of the Petunses, which are committed to the mill for another grinding. As to the second urn, wherein the skimmings of the first were put, when the water is well settled and become quite clear, they pour it off, and fill a kind of moulds with the sediment collected at the bottom, which, when
almost

almost dry, they take out and cut into square pieces. The preparation of the Kaulin is the same, only this being softer will dissolve in the water without pounding.

A third ingredient in the composition of Porcelane is an oil or varnish drawn from the hard Petunses, which for this purpose undergo the same preparation as for making the squares, except that the sediment of the second vessel is not put into moulds, but the finest part of it used to compose the oil, as they call it, which is a whitish liquid matter. With this matter they mix a powder made of a calcined mineral stone called Shekau, resembling our alum, which gives the oil a good consistence, but not so as to destroy its fluidity.

The oil of lime makes a fourth ingredient, the preparation whereof is more tedious than the former. They first sprinkle water on quick lime, and thereby reduce it to a powder, on which they lay a bed of dry fern, and on the fern another of slaked lime, and thus alternately till they have a pile of a moderate height; which done, they set fire to the fern, and the whole being consumed they sprinkle the ashes on new beds of fern, setting them on fire as before. This they repeat five or six times successively, or even more; the oil being the better, the oftner the ashes are burnt. A quantity of these ashes are now put into a vessel of water, and to every hundred weight of ashes is added a pound of Shekau, which dissolves in
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the water. This mixture is well stirred together, then stands to settle, and after a farther preparation in another vessel, the sediment at the bottom, which is to be kept liquid, is what they call the oil of lime, esteeming it as the soul of the former oil, and that which gives the Porcelane all its lustre. Ten measures of the Petunse oil are usually mixed with one of lime; and to have the mixture just, the two oils should be of an equal thickness.

It is almost inconceivable what a number of Persons are employed in this manufacture, there being scarce a piece of Porcelane that does not pass through more than sixty hands before it is brought to perfection. The places they work in are vast inclosed yards, built round with sheds and other conveniencies, as well as lodgings for the workmen. In mixing the two earths, regard is had to the fineness of the ware intended to be made, equal quantities of Petunse and Kaulin being used for the finest Porcelanes, and one part of Kaulin to three of Petunse for the coarsest. The hardest part of the work is the kneading and incorporating the two earths together, which is done in large basons or pits well paved and cemented, wherein the workmen trample it continually with their feet, relieving one another, till the mass be well mixed, grows hard, and is fit for the potter. After the earth is taken out of the pits, it is kneaded by piece-meal with the hands, on large slates; and on this operation the goodness of the work very much depends,

pende, the least heterogeneous Body remaining in the mass, or the least vacuity, being enough to spoil the whole. The smallest grain of sand, nay sometimes a single hair, will make the Porcelane crack, warp, or splinter.

Smooth pieces of Porcelane, such as cups, saucers, dishes, &c. are fashioned with the wheel, like our earthen ware; but those which are adorned with figures of animals, &c. in relievo, are formed in moulds, and finished with the chissel. Indeed all the Porcelanes made in moulds are finished by the hand, with several instruments proper to dig, smooth, polish, and touch up the strokes that escape the mould; so that it is rather a work of sculpture than of pottery. On some vessels they add relievo's ready made, as dragons, flowers, &c. and others have ornaments engraven with a kind of puncheons. The moulds are made of a yellow earth, well kneaded and beaten, and are sold very dear, but they last a long time.

It is to be observed, that large vessels of Porcelane are made at twice, one half of the piece being raised on the wheel by three or four workmen, who hold it till it has acquired its figure; and the other half being formed in the same manner, they join them together with Porcelane earth dissolved in water, polishing the juncture with a kind of iron spatula. By the same means they join together several pieces of Porcelane formed by moulds or by the hand; and also add handles, &c.

to cups or other vessels fashioned by the wheel.

The many hands which a common tea-cup passes through before it be fit for the painter, may give us an idea of the number employed in other branches of this curious manufacture. The cup is begun by the potter, who has the management of the wheel, from whence it acquires its form, height, and diameter; but it comes out of his hands very imperfect, especially towards the foot, which is only an unformed lump of earth, to be cut with the chissel when the cup is dry. From the wheel the cup is received by a second workman, who forms its base; and a third takes it immediately from him, and applies it to a mould on a kind of lathe, to give it its true shape. A fourth workman polishes the cup with a chissel, especially about the edge, and brings it to such a thinness as is necessary to make it transparent; in doing which he moistens it from time to time, to prevent its breaking. After this another turns it gently on a mould to smooth its inside, taking great care that it be done equally, lest it should warp, or any cavity be formed. Some workmen add relievo's, others adorn the vessels with the graver or puncheon, others add handles, &c. each keeping to his particular employment. Even the rounding and hollowing the foot of a cup on the inside with a chissel, is the business of an artist who meddles with no other part. And this multiplicity of hands is so far from retarding the work, that

it is found by experience to be carried on the faster for it, as well as to be better performed; each workman, by a continual attention to the same thing, being more perfect and ready at it, than if he were frequently shifting from one operation to another.

The painting is none of the least beauties of the Porcelane, but it would be a considerable addition to it if the designs were more just and regular. Their flowers and landskips indeed are sometimes tolerable, and their borders prettily variegated, but their human figures are monstrous, and look as if they were fond of deviating from nature. This business is divided among a great many workmen in the same laboratory: one is employed in forming the coloured circle about the edges of the Porcelane; a second traces out flowers, which another paints; this is for landskips only, that for birds and other animals, and a third for human figures. As to the colours of Porcelane, they are various, both with respect to the ground, and the paintings. Some are simple, as all blues, which are those usually seen in Europe; others are made up of several tints, and others are heightened with gold.

The blue is made of Lapis Lazuli calcined, and reduced to an impalpable powder by beating it in Porcelane mortars not varnished, with pestles of the same matter. For red they put copperas in a covered crucible, in the lid whereof there is a little hole, which they heat
with

heat with a reverberatory fire till the black smoke ceases to ascend, and a fine red one succeeds it. By this process a pound of copperas yields four ounces of red liquor, which is found at the bottom of the crucible, though the finest part is that which adheres to the lid and sides. The powder of a white transparent flint, calcined like the Lapis Lazuli, is also an ingredient in several of their colours. The green, for instance, is made with three ounces of the scoria of beaten copper, half an ounce of powder of flint, and an ounce of ceruse. For violet, they add white to the green already prepared; and for yellow they use seven drachms of white, and three of the copperas red. Most of these colours are mixed with gum-water for application; a little salt-petre, sometimes ceruse or copperas, but more usually the latter, being first dissolved in the water. When the vessels are to be quite red, the colour is usually applied with the common varnish of the Petunse; but there is another sort of red, called Blown Red, because applied by blowing through a pipe, one end whereof is covered with a fine gauze, on which the colour is spread, and by blowing at the other end the Porcelane is sprinkled all over with little stains, which are exceeding beautiful. This sort of ware is very scarce, and of great value.

The black Porcelane has likewise its beauty, whose colour has a leadish cast, and is usually heightened with gold. Three parts of Lapis Lazuli, with seven of the common oil of stone,

make this colour, which is not applied till the porcelane be dry. Gold is prepared for application, by breaking it, and steeping it in water, till a thin gilded cloud rises on the surface: it is used with gum-water, and to give it a body, they add three parts of ceruse to thirty of gold.

There are several other kinds of porcelane, but such as are rather for ornament and curiosity than for use. One of the prettiest is the Magic porcelane, so called because the paintings of the cups do not appear, unless they are filled with liquor. The secret of making these magic porcelanes, is said to be almost lost among the Chinese, but our author informs us, they must be very thin; and the colours, which in other cups are applied on the outside, are in these, applied on the inside. When the colours are dry, they are covered over with a size made of the porcelane earth, and thus they are inclosed between two earthen laminæ. After the size is dry, they pour oil into the cup; and when it is saturated therewith, they return it to the wheel, to be made as thin and transparent as possible. The colours here used are always the finest, and the figures painted, are fishes, which are the most suitable, as they seem to swim in the liquor.

The painting of the several kinds of porcelane being finished, and the colours dry, the next step is to polish them, to prepare them to receive the oil or varnish, whose composition

tion has been already mentioned. This is done with a pencil of very fine feathers dipped in water, and brushed lightly over the porcelain, which takes off the least roughness or inequalities. It is then fit to be varnished, in which operation a great deal of care and skill are requisite, both that the varnish be laid on equally, and not in too large quantites; for it is applied thicker or thinner, and seldom or oftener repeated, according to the fineness of the porcelain.

We now come to the last preparation of this brittle ware, viz. the baking it, for which purpose, the Chinese have two kinds of ovens; large ones, for such works as are only to be once baked, which is the common way; and small ones, for those that require a double baking. The large ovens are two fathoms deep, and almost four wide, and the sides and roof are so thick, that one may lay one's hand on them, when the fire is at its height, without danger of burning. They are built in form of a tunnel, having a large aperture at top, to give vent to the smoke and flame, besides four or five small ones round them, which are opened or shut, to diminish or augment the heat, like the holes called registers, in the furnaces of chemists. Each oven is placed at the end of a long narrow passage, which serves instead of bellows, the wind being thus driven directly to the mouth of the furnace.

Every piece of porcelane of considerable value, is disposed in the oven in a separate case, or coffin; but as to tea-cups, and such small vessels, the same case serves for several. These cases are made of the same earth with the oven, and usually of a cylindrical form, that the fire may communicate itself the more equably to the porcelane inclosed. The bottom of each case is sprinkled over with very fine sand, covered with dust of Kaulin, that the sand may not stick to the work; and care is taken that the porcelane do not touch the sides of the cases. In the larger cases, which contain the small pieces, they leave the middle vacant, because the vessels placed there would want the necessary heat; and each of these little pieces is raised on a small mass of earth, covered with powder of Kaulin. The porcelane is put into cases, lest the too violent effects of a naked fire should diminish its lustre; for it is owing to these thick coverings, that the beautiful complexion of the ware is not tarnished by the excessive heat.

As fast as the cases are filled, a workman ranges them in the furnace, forming them into piles or columns, whereof those in the middle are at least seven feet high. The cases of the finest porcelane are placed in the centre, and the coarsest at the bottom; and in this manner, the whole cavity of the oven is filled with piles, except that part directly under the large aperture. These piles are placed near one another, and are so bound together at top,
at

at bottom, and in the middle, as that the flame may have a free passage among them, and insinuate itself equally on all sides; in which lies a great part of the workman's art, and on which the goodness of the porcelane much depends. Another thing they observe is, never to fill an oven with all new cases, but half new, half old; the old ones being set at the top and bottom of the pile, and the new ones in the middle. These cases are yellow before they are burnt, but afterwards of a dark red.

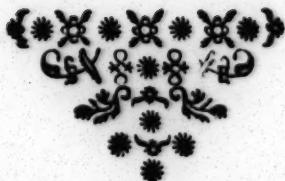
When the oven is full, the door or mouth is walled up, only a little hole being left to throw in small pieces of wood to feed the fire. It is then heated gradually for four and twenty hours; after which, two men, who relieve one another, throw in fuel without intermission: and what seems very strange to our author, the workmen thus employed about the furnaces, drink hot tea with salt dissolved in it, to quench their thirst. To know when the porcelane is sufficiently baked, they open one of the little holes abovementioned, and with a pair of tongs, take off the covering from the top of one of the piles; and if these appear to be equally heated, and the colours of the porcelane uncovered have a noble lustre, they discontinue the fire, and close up the aperture left at the mouth of the furnace. After the fire is extinguished, if the baking consist of cups, and such-like small vessels, they let them remain in the oven about twelve or fifteen hours; but if the porcelane be large, they defer

defer opening it for two or three days: in which particular, the modern practice differs from the antient, wherein all kinds of vessels remained in the oven considerably longer.

There is another sort of porcelane, which is twice painted, and twice baked, for which they have little ovens on purpose. Some of these are made of iron, and are very small; others of a kind of bricks, of the same earth with the porcelane cases. The largest of them, however, does not exceed five feet in height, and three in diameter, being built in the form of bee-hives. Round the oven, at about half a foot distance, is raised a shell of common bricks, joined to the oven itself, by a kind of arch, which serves to strengthen it; and four or five of these are usually built at equal distances from each other. At the bottom of the shell, are holes to give air to the fire, and at the top, there is an aperture, which is covered when the porcelane is put into the oven. The ware here is not inclosed in coffins, as in the larger furnaces, the oven serving for that purpose, and being so exactly closed, that the vessels receive no impression of the fire, but what proceeds from the charcoal, disposed in the hearth, at the bottom of the oven, and in the interval, between the oven and external shell.

To prepare the porcelane for this second baking, it is varnished in the common manner; and having passed the great oven, it is
then

then painted with various colours, after which, without any additional varnishing, it is ranged in piles, in the little oven, the small vessels being placed upon the larger in form of pyramids. The intent of the second baking is sometimes to preserve the colours the better, and to give them a sort of relieve; but its more usual design is to hide defective places with the colouring, though this artifice is not difficult to be discovered.



SECT.



S E C T. IV.

Particular Descriptions of the most remarkable public Buildings, and other singular Productions of Art, in China and Japan.

IT may be said of the cities in China in general, that they are regularly and beautifully built ; most of them are of a square or quadrangular form, with the streets in straight lines, and intersecting each other at right angles. Some cities are of a circular or oval figure ; but all are built with great symmetry and uniformity, and surrounded with high walls and turrets. As for the houses and other buildings, especially the public ones, they commonly wear the best side outwards, and, notwithstanding the oddness of their taste, appear beautiful enough ; but the furniture of the inside is not extraordinary, if we except their fine cabinets, screens, and such-like ornaments, with their China jars, and other pieces of that noble manufacture. The custom of the country indeed renders sumptuous furniture unnecessary, for it is not usual to admit either strangers or friends into the inner part of their houses, but to entertain them in a kind of separate apartment, built something like our summer-houses, which are very neat and convenient, and more or less adorned according to the quality of the owner,

owner, but cannot be called stately or magnificent, the roofs being only supported by wooden columns, and generally without a cieling. Their beds, which are the finest part of their furniture, have embroidered curtains of taffety in summer, or some very thin silk, which serve to keep off the flies and gnats, but admit a free passage for the air; and in winter they have them of coarse sattin, with some kind of embroidery. They have no tapestry; but there is one sort of ornament they are very fond of, viz. pieces of white silk hanging on the walls or wainscot of their apartments, on which are written in a large character some moral sentences, taken out of the writings of their celebrated philosophers. These short sentences are in such esteem among them, that they frequently have them on their fans, screens, pictures, cabinets, and even upon their vessels of porcelane. They have no chimneys in their rooms, but make use of stoves of charcoal to warm them in cold weather.

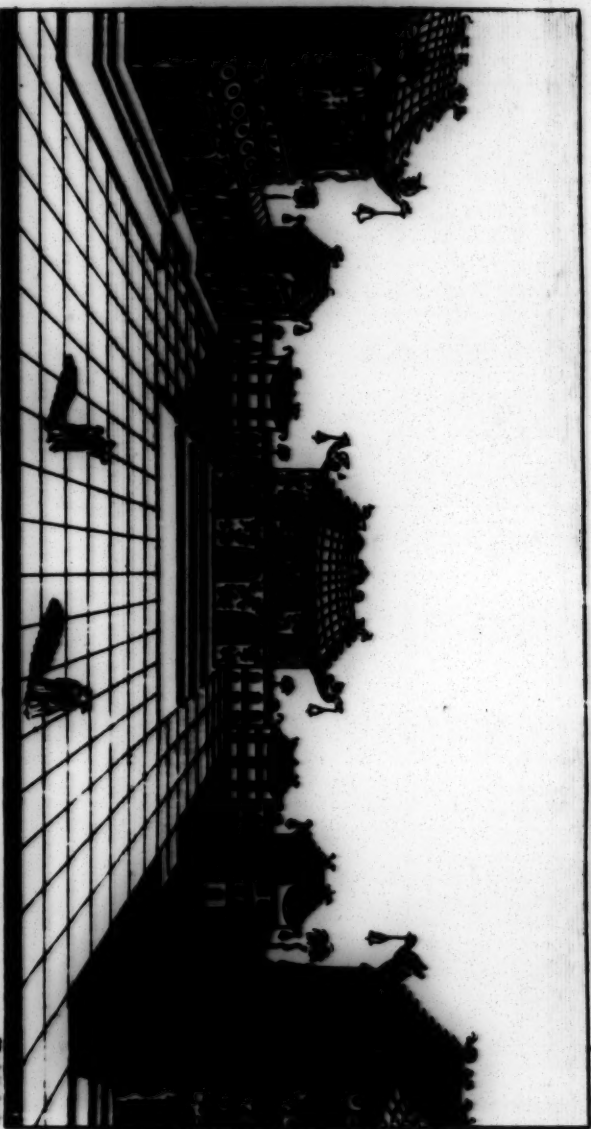
The Japanese affect a beautiful plainness and neatness in their buildings. Their houses are mostly of wood, though some of the better sort have a stone foundation; and they are but one story high, like those of China, on account of the frequent hurricanes and earthquakes to which the country is subject. These wooden buildings make their cities very liable to fires, which often make great devastations amongst them; but many people have an apartment of stone, separate from their houses, wherein they
secure

secure their most valuable effects, when they are threatened by such disasters. Their floors are covered with mats, which are always kept very clean; instead of which the richer sort of people use silk stuffs, embroidered velvet, and cloth of gold. Their rooms are generally wainscotted, and either curiously painted after their manner, or hung with pictures and painted paper neatly put together. The ground apartments are separated from each other by partitions that are gilt and painted, and can be folded and removed like screens; so that five or six of them may be easily thrown into one, as is usual at their grand entertainments, or according as the business and company requires. The chief furniture of the houses of the nobility is likewise rather elegant than sumptuous, consisting of cabinets, screens, beds, &c. of the best sort, but they do not affect a shew of plate, jewels, and other costly ornaments. Porcelane vessels, which the Japanese make very large and exquisitely fine, are the chief embellishments of their rooms, excepting curious scymetars, and other kinds of armoury. What appears most splendid are the cielings of their halls, stair-cases, and summer-houses, which are commonly of fine cedar, and beautifully gilt and painted. Before their houses they have usually a spacious court, with an ascent of three or four steps, and a like descent behind, which leads into the gardens.

This account may suffice for the buildings of China and Japan in general, but some of their palaces,

The inner Court of the Emperor of China's Palace

From the top





palaces, temples, and other structures require a more particular description. The imperial palace at Pekin in China, is one of the greatest curiosities in the whole empire. It is an oblong square, about two miles in length, and one in breadth, surrounded by two stout walls, the outermost whereof is of a vast height and thickness, and covered within and without with a red kind of cement, and on the top with ranges of brick of a beautiful yellow. Each end has a magnificent gate, or more properly three gates, the middlemost of which is only opened for the Emperor, but the other two are open for all comers and goers from morning till night. In the interval between the two walls are the apartments of the nobles and great officers of state, and of a great number of artificers constantly employed by the Emperor; besides the courts of judicature, and divers other offices and lodgings, all of them very large and stately. The innermost wall is surrounded by a deep ditch lined with stone, having draw-bridges over it at the several gates, which are only opened to the Mandarins or lords in waiting, and to such as bring a ticket from them, specifying their business. Within this inclosure stands the imperial palace properly so called, with its gardens, baths, pleasure-houses, and whatever is magnificent and delightful, particularly an artificial lake well stored with fish, where the court sometimes take the diversion of fishing in their barges. There are nine large courts or squares within this wall, all which are surrounded with stately

buildings, and we pass through lofty arches from one court to another, each rising higher than the former. In the inner court of all, which is the noblest and highest, are the apartments of the Emperor, and a grand seraglio of fine women, one of whom bears the title of Empress, and the rest are his concubines, or ladies and maids of honour. There is also a great number of women who have the management of the kitchen, cellar, &c. so that it is computed the whole number of the fair sex attending the imperial court amounts to above five thousand, not to mention the eunuchs, who are likewise very numerous. This innermost quadrangle is ascended by a flight of six steps on all sides, and surrounded with a noble ballustrade, adorned with lions, dragons, and other embellishments. The buildings of this square are all stately and beautiful, but that which is the residence of the Emperor far surpasses the rest in splendor and magnificence. The fine porticoes supported by marble pillars, the glazed tiling, the curious carvings, gildings, and paintings, with which the apartments are adorned, the richness of the furniture, and the various pieces of architecture that make up the whole palace, all together have a surprising effect, and look every way becoming the majesty of so great a Monarch.

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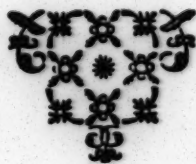
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LONDON, March 30, 1764.

Published according to Act of Parliament.

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